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Science and Engineering State Profiles

Fall 1996

Detailed Statistical Tables

Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

NSF 97-306

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Science and Engineering State Profiles

Fall 1996

Detailed Statistical Tables

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Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

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OVERVIEW

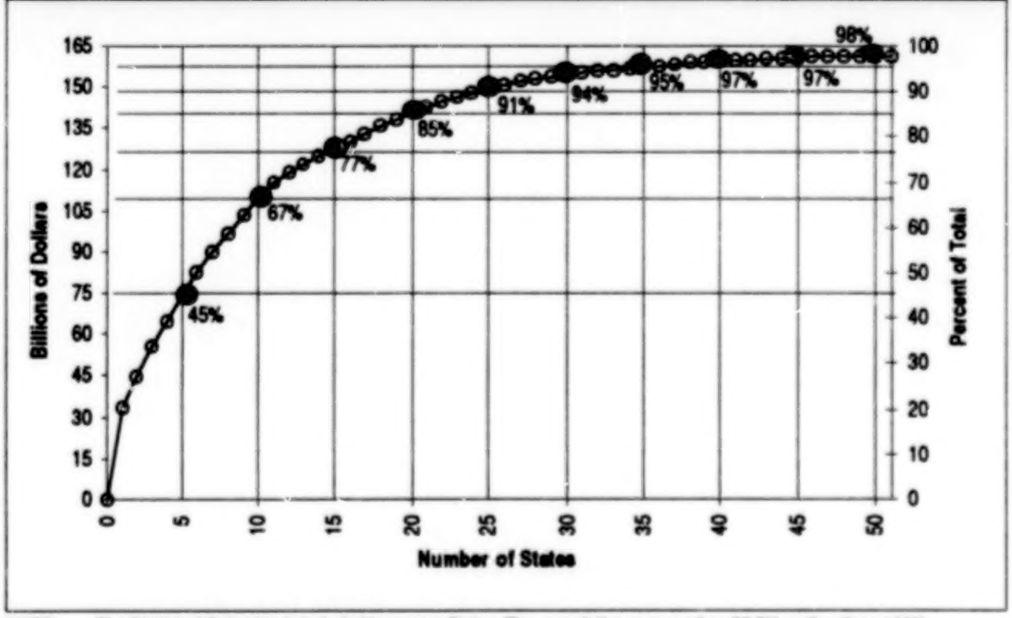
INTRODUCTION

Data from the National Science Foundation (NSF) detail the geographic distribution of the 1993 U.S. research and development (R&D) spending total ($165 billion). The data include R&D performance by industry, academia, and the Federal Government and the federally funded R&D activities of nonprofit institutions. Substantial state-specific information also is available on the Federal agency sources of R&D support and on the R&D-performing sectors that receive Federal funding. These and many more statistics have been compiled in a set of 51 State Science & Engineering Profiles (including one for the District of Columbia). A Profile also is included for Puerto Rico, although statistics on its total and industry R&D performance were not available.

STATE DISTRIBUTION OF R&D PERFORMANCE

Roughly one-half of the $165 billion of R&D spending in 1993 occurred in just six states (California, New York, Michigan, New Jersey, Massachusetts, and Pennsylvania) and 10 states (adding Texas, Illinois, Ohio, and Maryland) accounted for about two-thirds of the national effort (chart 1). In each of these 10 states, more than $6 billion was spent on R&D. Performance in California alone reached $34 billion, one-fifth of all U.S. funds. R&D performance in each of the next 10 states totaled more than $2 billion; when combined with the first 10 states, they collectively accounted for 85 percent of R&D conducted nationwide in 1993. In contrast, the 20 states with the smallest instate R&D performance collectively accounted for just $6 billion, 4 percent of nationally performed R&D (table 1).

Chart 1. Cumulative distribution of U.S. R&D performance, by State: 1993



NOTE: The District of Columbia is included here as a State. The cumulative sum reaches 97.8%, rather than 100%, due to R&D performance in the other/unknown category (unassignable to a State).

SOURCE: National Science Foundation/SRS, *National Patterns of R&D Resources: 1996*, NSF 96-333, (Arlington, VA, 1997).

Table 1 Geographic distribution of U.S. R&D expenditures by performer and source of funds: 1993

Page 1 of 3

Geographic area	United States Total used	Federal Govt. Total used 1/	Industry Sources			Universities & colleges Sources						U&C FFRDCs Total used 5/	Non-profits Total used 6/
			Total used 2/	Federal Govt.	Industry 3/	Total used 4/	Federal Govt.	Nonfed. govt.	Industry	U&C	All other		
			Millions of Current Dollars										
Total, U.S.	165,048	16,663	117,400	22,809	94,388	19,940	11,956	1,559	1,361	3,578	1,486	5,295	5,750
New England	13,674	730	10,092	2,311	7,781	1,736	1,172	39	133	214	178	355	761
Connecticut	2,809	53	2,373	419	1,954	365	221	10	18	81	35	0	18
Maine	114	13	59	D	D	25	9	2	4	10	0	0	17
Massachusetts	9,486	384	6,952	1,878	5,074	1,094	772	15	98	80	128	355	701
New Hampshire	438	89	248	D	D	99	68	6	5	12	9	0	2
Rhode Island	484	185	176	12	164	103	72	3	3	23	2	0	20
Vermont	343	6	284	D	D	50	32	3	5	8	3	0	3
Middle Atlantic	28,434	994	23,693	2,912	20,781	2,938	1,896	132	225	446	238	445	364
New Jersey	9,181	509	8,162	378	7,784	374	167	36	26	116	28	116	20
New York	10,974	131	8,820	1,392	7,428	1,545	1,052	76	88	180	149	293	185
Pennsylvania	8,278	354	6,711	1,142	5,569	1,019	677	20	112	149	61	35	159
South Atlantic	22,994	8,034	10,692	3,078	7,614	3,605	2,224	307	281	643	166	63	600
Delaware	1,247	12	1,181	24	1,157	53	26	4	5	14	4	0	1
D.C.	2,543	1,713	540	21	519	145	100	1	10	18	15	0	145
Florida	3,526	608	2,425	970	1,455	489	268	32	41	120	29	0	4
Georgia	1,577	159	860	63	797	547	273	39	52	168	15	0	11
Maryland	7,423	4,010	2,076	1,287	789	1,128	842	90	48	116	32	0	209
North Carolina	2,745	174	1,929	16	1,913	605	378	74	70	64	19	0	37
South Carolina	713	38	495	D	D	178	73	16	14	53	22	0	2
Virginia	2,941	1,227	1,087	595	492	405	228	46	36	69	26	35	187
West Virginia	280	93	100	D	D	55	32	2	4	14	3	28	4
Southeast	3,935	[illegible]	1,966	865	1,101	787	452	86	63	134	51	11	72
Alabama	1,967	81	833	406	427	281	161	27	24	48	21	0	20
Kentucky	429	16	289	7	282	122	56	6	14	41	6	0	2
Mississippi	325	163	52	D	D	106	55	22	10	11	8	0	4
Tennessee	1,214	87	792	D	D	278	180	31	16	34	16	11	46
Southwest	8,269	586	5,547	658	4,889	1,689	861	268	123	436	201	5	242
Arkansas	301	41	185	D	D	74	25	24	7	15	3	0	1
Louisiana	470	43	170	D	D	255	96	64	17	61	17	0	2
Oklahoma	533	34	311	2	309	173	56	22	10	67	16	0	2
Texas	6,966	468	4,882	640	4,242	1,387	683	158	90	293	164	5	224

See explanatory information, if any, and SOURCE at end of table.

Table 1. Geographic distribution of U.S. R&D expenditures, by performer and source of funds: 1993 - Continued

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Geographic area	United States Total used	Federal Govt. Total used 1/	Industry Sources			Universities & colleges Sources						U&C FFRDCs Total used 5/	Non-profits Total used 6/
			Total used 2/	Federal Govt.	Industry 3/	Total used 4/	Federal Govt.	Nonfed. govt.	Industry	U&C	All other		
			Millions of Current Dollars										
Great Lakes	28,364	877	23,830	1,642	22,188	2,798	1,573	220	181	559	264	649	210
Illinois	6,778	83	5,242	236	5,006	758	425	46	45	178	64	649	46
Indiana	2,560	77	2,177	D	D	303	168	21	23	66	26	0	3
Michigan	10,778	96	9,924	153	9,771	700	377	40	47	172	64	0	58
Ohio	6,398	583	5,144	1,030	4,114	594	348	46	48	89	62	0	77
Wisconsin	1,851	38	1,343	D	D	444	255	68	19	54	48	0	26
Plains	6,519	198	4,616	816	4,000	1,342	643	194	90	331	84	37	126
Iowa	902	30	533	D	D	299	145	38	18	81	17	37	3
Kansas	463	12	292	47	245	154	60	37	8	44	6	0	5
Minnesota	2,922	40	2,458	378	2,080	332	175	50	22	65	21	0	92
Missouri	1,789	51	1,375	D	D	345	191	19	31	78	25	0	18
Nebraska	295	25	128	14	114	136	38	40	9	36	13	0	6
North Dakota	91	27	9	D	D	54	25	2	2	24	2	0	1
South Dakota	58	13	22	D	D	22	9	10	1	2	1	0	1
Mountain	8,820	1,161	5,013	1,651	3,362	1,233	718	81	89	273	72	1,223	189
Arizona	1,608	206	1,042	298	744	311	150	6	19	113	23	40	9
Colorado	2,864	170	2,111	252	1,859	331	222	18	24	42	26	99	153
Idaho	477	37	391	D	D	49	17	13	7	11	1	0	0
Montana	85	22	14	D	D	48	21	9	3	14	0	0	1
Nevada	218	71	67	D	D	79	43	4	5	25	1	0	1
New Mexico	2,752	504	962	D	D	187	113	14	19	29	12	1,084	15
Utah	753	141	411	51	360	196	137	13	9	29	8	0	5
Wyoming	63	10	15	D	D	33	15	4	2	11	1	0	5

See explanatory information, if any, and SOURCE at end of table.

Table 1. Geographic distribution of U.S. R&D expenditures, by performer and source of funds: 1993 - Continued

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Geographic area	United States Total used	Federal Govt. Total used 1/	Industry Sources Total used 2/	Industry Sources Federal Govt.	Industry Sources Industry 3/	Universities & colleges Sources Total used 4/	Universities & colleges Sources Federal Govt.	Universities & colleges Sources Nonfed. govt.	Universities & colleges Sources Industry	Universities & colleges Sources U&C	Universities & colleges Sources All other	U&C FFRDCs Total used 5/	Non-profits Total used 6/
			Millions of Current Dollars										
Pacific	40,427	2,039	31,971	8,393	23,578	3,174	2,160	186	146	475	207	2,499	744
Alaska	130	48	14	D	D	67	42	3	5	17	0	0	1
California	33,721	1,785	26,541	7,463	19,078	2,380	1,630	112	99	368	171	2,499	516
Hawaii	380	42	255	D	D	74	41	27	0	3	2	0	9
Oregon	774	51	471	32	439	226	135	30	9	34	18	0	26
Washington	5,422	113	4,689	891	3,798	428	312	14	34	52	16	0	192
Other/unknown7/	3,612	945	-220	483	-906	437	257	45	30	67	24	8	2,442

D = withheld to avoid disclosing operations of individual companies

FFRDC = federally funded research and development center

U&C = universities and colleges

1/ Total funds used by the Federal Government are from federal sources.

2/ Industry totals include R&D performed by industry-administered FFRDCs. Totals for the following States are more than 50 percent imputed: Delaware, D.C., Kansas, Louisiana, Missouri, Washington, and West Virginia. Totals for the following States were based entirely on estimates by NSF: Maine, Montana, New Mexico, and Vermont.

3/ Industry R&D support to industry performers include all nonfederal sources of funds.

4/ For universities and colleges, funds distributed by state and region are for doctorate-granting institutions only.

5/ Includes R&D expenditures of university-associated FFRDCs, of which 99 percent were from federal sources.

6/ For the nonprofit sector, funds distributed by state and region include only federal obligations to organizations in this sector, including associated FFRDCs. Estimated nonfederal support to the nonprofit sector is included in "other/unknown."

7/ Negative figures for industry reflect revisions in industry aggregate R&D totals that could not be allocated to individual states.

SOURCES: National Science Foundation/SRS. Data were derived from NSF/SRS, *Research and Development in Industry 1993*; NSF/SRS, *Academic Science/Engineering: R&D Expenditures, Fiscal Year 1994*; and NSF/SRS, *Federal Funds for Research and Development; Fiscal Years 1993, 1994, and 1995*.

Not coincidentally, states that are national leaders in total R&D performance usually are leading sites of industrial and academic R&D performance (table 2).

- All but Maryland ranked among the top 10 industrial performers-Washington State (ranking 11th for total R&D) held the 10th spot for industrial R&D.

- All but New Jersey ranked among the top 10 academic performers-North Carolina (ranking 18th overall) ranked ninth among the academic listings.

The top 10 sites for R&D performed in Federal labs include 5 of the 10 states ranked highest in total R&D. Washington, DC, and Virginia are listed among the Federal top 10, a fact that-along with the number one ranking for Maryland-reflects the concentration of Federal facilities and administrative offices within the Washington, DC, metropolitan area. Alabama, Florida, and New Mexico-with major space- and defense-related research activity-also were ranked among the Federal R&D top 10, but not among the 10 largest total R&D performers.

Table 2. R&D performance by state and sector and ratio of R&D to gross state product: 1993

Rank	Total R&D[1]	Largest 10 performers (ranked by size of R&D in sector)				R&D intensity	
		Total	Industry	Universities and colleges[2]	Federal Government[2]	Largest 10	R&D/GSP
	[Millions of dollars]						[Percent]
1	$33,721	California	California	California	Maryland	New Mexico	8.1
2	10,974	New York	Michigan	New York	California	Maryland	6.2
3	10,778	Michigan	New York	Texas	DC	DC	6.1
4	9,486	Massachusetts	New Jersey	Maryland	Virginia	Massachusetts	5.7
5	9,181	New Jersey	Massachusetts	Massachusetts	Alabama	Michigan	5.1
6	8,278	Pennsylvania	Pennsylvania	Pennsylvania	Florida	Delaware	4.9
7	7,423	Maryland	Illinois	Illinois	Ohio	California	4.3
8	6,966	Texas	Ohio	Michigan	New Jersey	Washington	4.2
9	6,778	Illinois	Texas	North Carolina	New Mexico	New Jersey	4.0
10	6,398	Ohio	Washington	Ohio	Texas	Colorado	3.2

[1] Includes instate R&D performance of industry, universities, federally funded research and development centers (FFRDCs), and Federal agencies and the federally funded R&D performance of nonprofit institutions.

[2] Excludes R&D activities of FFRDCs located within these states.

KEY: GSP = gross state product

SOURCE: NSF/SRS, *National Patterns of R&D Resources: 1996*, NSF 96-333, (Arlington, VA, 1997).

RATIO OF R&D TO GROSS STATE PRODUCT

These state rankings change when R&D expenditures are normalized by the size of each state. Just as the ratio of R&D expenditures to GDP is used to gauge a country's commitment to R&D, the ratio of instate R&D performance to gross state product (GSP) measures the R&D intensity of a state's economy and facilitates more meaningful interstate comparisons. For example, whereas the U.S. R&D/GDP ratio was 2.6 percent in 1993, the largest R&D/GSP ratio was achieved in New Mexico (8.1 percent) even though the state ranked 17th in terms of total R&D spending. The high research intensity of New Mexico's economy grew primarily from the considerable Federal support provided by the Department of Energy to the several federally funded R&D centers (FFRDCs) located in the state.

On the other hand, California-ranked first each in total, industrial, and academic R&D spending-ranked seventh in terms of R&D intensity, 4.3 percent. Most small performers, however, have low R&D intensities. There were 19 states with less than $0.5 billion of R&D spending, and 14 of them had an R&D/GSP ratio of less than 1.0 percent.

FEDERAL SUPPORT FOR R&D

As reported by the Federal agencies that fund R&D, the Department of Defense (DOD) and the Department of Health and Human Services (HHS) collectively provided 69 percent of the Federal Government's R&D support in FY 1994 to all performers, including firms, universities, nonprofit institutions, and Federal labs. California and Maryland were the two largest recipients of total Federal R&D support (table 3). Performers-primarily industrial firms-in California received 19 percent of DOD's R&D support, and Maryland received 23 percent of HHS funding primarily in support of the intramural activities undertaken at its National Institutes of Health biomedical research facilities. California also received more of the R&D funds than any other state from the National Aeronautics and Space Administration (the main recipients being firms and FFRDCs) and the National Science Foundation (support going to universities and colleges). Maryland led all other states in receiving 34 percent of R&D funds from the Department of Commerce (DOC). Again, intramural research activities accounted for most of Maryland's DOC funding, here undertaken mostly at the agency's National Institute of Standards and Technology.

Table 3. Federal R&D obligations by agency and state: FY 1994

Agency	Total R&D [Millions of dollars]	Primary recipient	Percent	Secondary recipient	Percent
Total, all agencies	65,654	California	17	Maryland	10
Department of Agriculture	1,378	Dist. of Columbia	12	Maryland	8
Department of Commerce	824	Maryland	34	Colorado	10
Department of Defense	34,433	California	19	Georgia	15
Department of Energy	6,038	New Mexico	20	California	17
Dept. of Health & Human Services	10,947	Maryland	23	California	11
Department of the Interior	587	Virginia	10	Colorado	9
Department of Transportation	618	Dist. of Columbia	22	New Jersey	14
Environmental Protection Agency	551	Dist. of Columbia	28	No. Carolina	21
National Aeronautics & Space Admin.	8,255	California	24	Texas	19
National Science Foundation	2,021	California	14	New York	10

SOURCE: NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 1994, 1995, and 1996, volume 44*, NSF 97-302 (Arlington, VA, 1996).

TECHNICAL NOTE:

Differences in performer-and source-reported Federal R&D

The National Science Foundation collects, and these Profiles contain, two separate estimates on total Federal funding of R&D. Survey data are obtained from both Federal funding agencies and performers of the work (Federal labs, industry, universities, and other nonprofit organizations). National totals, however, are based on data reported by performers because they are in the best position to (i) indicate how much they spent in the actual conduct of R&D in a given year and (ii) identify the source of their funds. Performer reporting also reduces the possibility of double-counting and conforms to international standards and guidance.

Historically, the two survey systems of funders and performers tracked fairly closely. For example, in 1980 performers reported using $29.5 billion in Federal R&D funding and Federal agencies' reported total R&D obligations of $29.8 billion. In recent years, the two series have diverged considerably: For 1993, performers report $60.3 billion in Federal R&D support, compared with the $67.3 billion reported by Federal agencies (table 4). The difference in the Federal R&D data totals appear to be concentrated in funding of industry: Overall, industrial firms have reported significant declines in Federal R&D support since 1990 while Federal agencies reported level or slightly increased funding of industrial R&D. For 1993, Federal agencies reported $31.8 billion in total R&D obligations provided to industrial performers compared with an estimated $22.8 billion in Federal R&D funding reported by industrial performers (table 5). Consequently, data users are cautioned to use considerable care in comparing the R&D performance data in table 2 (and detailed in the upper half of the Profiles) with that reported by Federal agencies in table 3 (and detailed in the lower half of the Profiles). NSF is investigating causal factors for these divergent trends.

Table 4. Difference in agency-reported and performer-reported Federal R&D, all performers, 1980-96

Year	Reported by Federal Agencies			Performer-reported Expenditures
	Authorizations	Obligations	Outlays	
	[millions of current dollars]			
1980	29,739	29,830	29,154	29,455
1981	33,735	33,104	32,459	33,415
1982	36,115	36,433	34,391	36,583
1983	38,768	38,712	36,659	40,838
1984	44,214	42,225	39,691	45,649
1985	49,887	48,360	44,171	52,128
1986	53,249	51,412	50,609	54,283
1987	57,069	55,254	51,612	57,914
1988	59,106	56,769	54,739	59,382
1989	62,115	61,406	59,450	59,799
1990	63,781	63,559	62,135	61,342
1991	65,898	61,295	61,130	60,120
1992	68,398	65,593	62,935	60,192
1993	69,884	67,314	65,241	60,323
1994	68,331	67,256	66,159	60,234
1995 (preliminary)	70,309	70,094	67,400	62,500
1996 (preliminary)	70,503	68,842	67,653	61,900

SOURCES: NSF/SRS, Survey of Federal Funds for Research and Development; Survey of Industrial Research and Development; Survey of Scientific & Engineering Expenditures at Universities and Colleges; and Office of Management and Budget, *Historical Tables, Budget of the United States Government-Fiscal Year 1997* (1996)

Table 5 Difference in agency-reported and performer-reported Federal R&D industrial performers by agency source: 1980-96

Year	Industry Survey			Federal Survey			Difference in Report Totals		
	Total	Department of Defense	Other agencies	Total	Department of Defense	Other agencies	Total	Department of Defense	Other agencies
	[millions of current dollars]								
1980	14,029			14,377			-348		
1981	16,382	10,540	5,842	16,282	10,931	5,351	100	-391	491
1982	18,545			18,698			-153		
1983	20,680	14,571	6,109	18,522	14,670	3,852	2,158	-99	2,257
1984	23,396			20,218			3,178		
1985	27,196	20,948	6,248	23,496	19,069	4,427	3,700	1,879	1,821
1986	27,891			25,898			1,993		
1987	30,757	22,252	8,505	28,629	24,258	4,371	2,128	-2,006	4,134
1988	30,343			28,630			1,713		
1989	28,554	NA	NA	30,603	25,043	5,56[illegible]	-2,049	NA	NA
1990	28,125			31,696			-3,571		
1991	26,372	NA	NA	28,589	21,349	7,240	-2,217	NA	NA
1992	24,722			31,862			-7,140		
1993	22,809	15,044	7,765	31,777	23,856	7,921	-8,968	-8,812	-156
1994	22,463			31,748			-9,285		

KEY: NA=not available

NOTES: Data from the Industry Survey are R&D expenditures as reported by performing firms. Data from the Federal Survey are R&D obligations to industry as reported by Federal agencies. The last three columns report the difference between the two data series.

SOURCES: NSF/SRS, Survey of Federal Funds for Research and Development and Survey of Industrial Research and Development

DATA SOURCES FOR SCIENCE & ENGINEERING STATE PROFILES

The remainder of this report is a set of 52 one page science and engineering (S&E) Profiles summarizing a variety of other state-specific data on S&E personnel and institutions. U.S and state R&D expenditures data were assembled from a number of ongoing NSF surveys, as well as for broader economic variables from non-SRS sources. The SRS-surveyed indicators include-

- doctoral scientists and engineers;
- S&E doctorates awarded, including by major S&E fields ("Life Sciences" for S&E doctorate data are the sum of biological and agricultural sciences. Medical or health-related data are not collected);
- S&E graduate students and post-doctorates;
- Federal R&D obligations, by agency and performer;
- total and industrial R&D expenditures; and
- academic R&D expenditures, including by major S&E fields.

The indicators from non-SRS sources include population, civilian labor force, per capita personal income, Federal expenditures, higher education expenditures, patents, small business innovation research awards, and gross state product originating in manufacturing, agriculture, trade, government, and services.

In these profiles, state rankings and totals are for the 50 states and the District of Columbia. For many surveys, some of the data either could not be allocated to specific geographic regions, or were for territories other than D.C. and the 50 states (for example, Puerto Rico). Consequently, U.S. totals reported here may differ with those reported in the underlying surveys. Further, an attempt was made to compile similar statistics for Puerto Rico. For some variables, the data sources differ from those used to obtain state data; for other variables, reliable, comparable data for Puerto Rico simply do not exist. Consequently, U.S. totals are reported exclusive of data on Puerto Rico. Rankings on the Puerto Rico S&E profile are excluded.

Specific data sources for S&E state profiles:

Doctoral scientists and engineers. National Science Foundation/SRS. *Characteristics of Doctoral Scientists and Engineers in the United States 1993*, NSF 96-302, (Arlington, VA, 1995).

S&E doctorates awarded. National Science Foundation/SRS. *Selected Data on Science and Engineering Doctorate Awards 1995*, NSF 96-303, (Arlington, VA, 1996).

S&E postdoctorates, S&E graduate students. National Science Foundation/SRS. *Selected Data on Graduate Students and Postdoctorates in Science and Engineering Fall 1994*, (forthcoming), (Arlington, VA, 1996), and unpublished tables.

Population. U.S. Department of Commerce, Bureau of the Census. Press release CB 96-10, (Washington, D.C., January 1996).

Civilian labor force. U.S. Department of Labor, Bureau of Labor Statistics. *State and Regional Unemployment, 1995 Annual Averages* (news release), USDL 96-147, April 17, 1996.

Personal income per capita. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis. *Survey of Current Business*, Volume 76, (Washington, D.C., May 1996).

Total Federal expenditures. U.S. Department of Commerce, Bureau of the Census. *Federal Expenditures by State for Fiscal Year 1995*, (Washington, D.C., June 1996).

Federal R&D obligations. National Science Foundation/SRS. *Federal Funds for Research and Development FY 1994, 1995, and 1996*, NSF 97-302, (Arlington, VA, 1996).

Total R&D performance. National Science Board. *Science & Engineering Indicators - 1996*, NSB-96-21, (Washington, D.C.).

Industry R&D. National Science Foundation/ SRS. *Research and Development in Industry 1993*, NSF 96-304, (Arlington, VA, 1995).

Academic R&D. National Science Foundation/ SRS. *Academic Science and Engineering R&D Expenditures FY 1994*, NSF 96-308, (Arlington, VA, 1996).

Higher education current-fund expenditures. U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. *Digest of Education Statistics 1995*, (Washington. D.C., 1995).

Number of SBIR awards. U.S. Small Business Administration, Office of Technology. *Small Business Innovation Development Act*, (Washington, D.C.). Annual Reports covering data for fiscal years 1990 through 1994.

Patents issued to state residents. U.S. Department of Commerce, U.S. Patent and Trademark Office. *Patent Counts by Country/State and Year: Utility Patents 1963-95*, (Washington, D.C., March 1996).

Gross state product. U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Analysis Division, (Washington, D.C., May 1995).

DATA USERS

We hope that you find the attached package on science and engineering State Profiles useful. These state-specific data have been obtained from numerous surveys of the National Science Foundation/Division of Science Resources Studies (SRS) and other Federal Government agencies. The data have been published in the source documents listed and are compiled here for your convenience. The dissemination of State Profiles are intended to address the widespread and persistent demand for state science and engineering data. SRS data, including State Profiles, are available through the World Wide Web (http://www.nsf.gov/sbe/srs/stats.htm).

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ALABAMA

Science and Engineering Profile

Doctoral scientists, 1993	4,402	430,332	28	Total R&D performance, 1993 (millions)	$1,967	$161,427	21
Doctoral engineers, 1993	1,228	81,293	20	Industry R&D, 1993 (millions)	$833	$117,622	25
S&E doctorates awarded, 1995	253	26,482	30	Academic R&D, 1994 (millions)	$296	$20,573	25
of which, in life sciences	39%	24%		of which, in life sciences	67%	55%	
in engineering	22%	23%		in engineering	17%	16%	
in psychology	12%	13%		in physical sciences	8%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	405	36,143	24	Higher education current-fund expenditures, 1993 (millions)	$2,715	$163,994	21
S&E graduate students, 1994				Number of SBIR awards, 1990-94	277	18,023	17
in doctorate-granting institutions	6,383	438,694	22	Patents issued to state residents, 1995	282	55,717	33
Population, 1995 (000s)	4,253	262,755	22	Gross state product, 1992 (billions)	$78.1	$5,994.1	24
Civilian labor force, 1995 (000s)	2,062	132,281	23	of which, agriculture	2%	2%	
				manufacturing, mining, construction	27%	23%	
Personal income per capita, 1995	$18,781	$22,788	42	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$22,719	$1,326,294	19	services	16%	20%	
R&D obligations, 1994 (millions)	$1,818	$65,654	13	government	16%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.
Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Alabama by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	[illegible]	All FFRDCs	[illegible]	[illegible] & colleges	[illegible]	[illegible]	[illegible]
Total, all agencies	1,818,354	775,544	0	833,531	181,735	23,463	4,081	13
Department of Agriculture	16,133	4,637	0	0	11,388	0	108	30
Department of Commerce	1,034	558	0	15	421	0	40	35
Department of Defense	844,263	435,053	0	387,600	20,107	1,503	0	13
Department of Energy	19,575	0	0	17,000	2,575	0	0	26
[illegible]	132,044	0	0	1,474	111,047	18,928	595	21
Department of the Interior	8,837	7,117	0	535	1,185	0	0	21
[illegible]	3,416	1,231	0	737	159	0	1,289	30
[illegible]	5,810	0	0	3,366	420	0	2,024	17
[illegible]	776,532	326,948	0	422,674	23,973	2,912	25	4
[illegible]	10,710	0	0	130	10,460	120	0	34
[illegible]	13	5	na	10	20	19	18	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

ALASKA

Science and Engineering Profile

	Alaska	U.S.	Rank
Doctoral scientists, 1993	1,086	430,332	49
Doctoral engineers, 1993	97	81,293	50
S&E doctorates awarded, 1995	19	26,482	50
of which, in life sciences	37%	24%	
in environmental sciences	21%	3%	
in engineering	11%	23%	
S&E postdoctorates, 1994 in doctorate-granting institutions	4	36,143	51
S&E graduate students, 1994 in doctorate-granting institutions	627	438,694	51
Population, 1995 (000s)	604	262,755	48
Civilian labor force, 1995 (000s)	302	132,281	49
Personal income per capita, 1995	$24,182	$22,788	11
Federal spending			
Total expenditures, 1995 (millions)	$4,198	$1,326,294	46
R&D obligations, 1994 (millions)	$157	$65,654	38

	Alaska	U.S.	Rank
Total R&D performance, 1993 (millions)	$130	$161,427	46
Industry R&D, 1993 (millions)	$14	$117,622	49
Academic R&D, 1994 (millions)	$76	$20,573	41
of which, in environmental sciences	47%	7%	
in life sciences	24%	55%	
in physical sciences	20%	10%	
Higher education current-fund expenditures, 1993 (millions)	$345	$163,994	49
Number of SBIR awards, 1990-94	3	18,023	49
Patents issued to state residents, 1995	39	55,717	50
Gross state product, 1992 (billions)	$26.0	$5,994.1	41
of which, agriculture	2%	2%	
manufacturing, mining, construction	38%	23%	
transportation, communication, utilities	13%	9%	
wholesale and retail trade	8%	16%	
finance, insurance, real estate	13%	18%	
services	10%	20%	
government	17%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Alaska by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	157,317	64,966	0	47,962	42,593	199	1,597	38
Department of Agriculture	7,768	6,026	0	0	1,742	0	0	40
Department of Commerce	32,457	30,353	0	0	1,962	0	142	9
Department of Defense	15,626	4,437	0	646	10,543	0	0	41
Department of Energy	47,178	0	0	46,705	473	0	0	20
Dept. of Health & Human Services	2,911	605	0	0	1,747	199	360	49
Department of the Interior	26,240	23,545	0	611	2,084	0	0	5
Department of Transportation	1,145	0	0	0	50	0	1,095	43
Environmental Protection Agency	0	0	0	0	0	0	0	na
Nat'l Aeronautics & Space Admin.	12,664	0	0	0	12,664	0	0	28
National Science Foundation	11,328	0	0	0	11,328	0	0	32
State rank	38	27	na	32	38	51	40	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

ARIZONA

Science and Engineering Profile

Doctoral scientists, 1993	4,849	430,332	27	Total R&D performance, 1993 (millions)	$1,608	$161,427	24
Doctoral engineers, 1993	1,323	81,293	18	industry R&D, 1993 (millions)	$1,042	$117,622	22
S&E doctorates awarded, 1995	455	26,482	20	Academic R&D, 1994 (millions)	$343	$20,573	20
of which, in engineering	24%	23%		of which, in life sciences	38%	55%	
in life sciences	20%	24%		in physical sciences	32%	10%	
in physical sciences	16%	14%		in engineering	12%	16%	
S&E postdoctorates, 1994 in doctorate-granting institutions	400	36,143	25	Higher education current-fund expenditures, 1993 (millions)	$1,728	$163,994	30
S&E graduate students, 1994 in doctorate-granting institutions	7,661	438,694	19	Number of SBIR awards, 1990-94	266	18,023	19
				Patents issued to state residents, 1995	999	55,717	18
Population, 1995 (000s)	4,218	262,755	23	Gross state product, 1992 (billions)	$74.1	$5,994.1	26
Civilian labor force, 1995 (000s)	2,120	132,281	21	of which, agriculture	2%	2%	
				manufacturing, mining, construction	19%	23%	
Personal income per capita, 1995	$20,421	$22,788	36	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	18%	18%	
Total expenditures, 1995 (millions)	$20,705	$1,326,294	22	services	21%	20%	
R&D obligations, 1994 (millions)	$795	$65,654	19	government	15%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Arizona by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	[illegible]	[illegible]	[illegible]
[illegible]	795,129	165,033	28,271	423,935	165,392	9,555	2,943	19
[illegible]	20,065	13,830	0	0	6,235	0	0	25
[illegible]	1,064	0	0	5	470	0	589	34
[illegible]	559,383	137,287	0	407,166	14,930	0	0	17
[illegible]	5,854	0	0	400	5,454	0	0	39
[illegible]	72,564	1,850	0	2,287	59,661	7,791	975	27
[illegible]	11,268	8,193	0	1,652	1,273	0	150	18
[illegible]	2,855	0	0	517	1,309	0	1,029	32
[illegible]	729	0	0	89	640	0	0	37
[illegible]	66,234	3,873	0	11,219	49,804	1,138	200	12
[illegible]	55,113	0	28,271	600	25,616	626	0	10
[illegible]	19	16	15	16	23	28	26	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

ARKANSAS

Science and Engineering Profile

Doctoral scientists, 1993	1,795	430,332	43	Total R&D performance, 1993 (millions)	$301	$161,427	42
Doctoral engineers, 1993	199	81,293	46	Industry R&D, 1993 (millions)	$185	$117,622	39
S&E doctorates awarded, 1995	69	26,482	42	Academic R&D, 1994 (millions)	$81	$20,573	40
of which, in life sciences	48%	24%		of which, in life sciences	74%	55%	
in engineering	20%	23%		in engineering	13%	16%	
in physical sciences	20%	14%		in physical sciences	5%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	84	36,143	40	expenditures, 1993 (millions)	$1,101	$163,994	37
S&E graduate students, 1994				Number of SBIR awards, 1990-94	14	18,023	45
in doctorate-granting institutions	1,589	438,694	42	Patents issued to state residents, 1995	106	55,717	44
Population, 1995 (000s)	2,484	262,755	33	Gross state product, 1992 (billions)	$44.0	$5,994.1	32
Civilian labor force, 1995 (000s)	1,223	132,281	33	of which, agriculture	5%	2%	
				manufacturing, mining, construction	28%	23%	
Personal income per capita, 1995	$17,429	$22,788	50	transportation, communication, utilities	11%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$11,754	$1,326,294	35	services	14%	20%	
R&D obligations, 1994 (millions)	$89	$65,654	41	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Arkansas by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] & colleges	[illegible] nonprofits	[illegible] government	[illegible] rank
Total, all agencies	88,868	44,675	0	2,811	36,482	3,572	1,328	41
Department of Agriculture	15,434	4,985	0	15	10,408	0	26	33
Department of Commerce	0	0	0	0	0	0	0	na
Department of [illegible]	5,248	119	0	482	4,647	0	0	47
Department of [illegible]	304	0	0	0	304	0	0	50
Dept. of [illegible]	55,186	35,548	0	1,141	16,236	1,798	463	30
[illegible]	5,194	3,721	0	0	193	1,280	0	31
[illegible]	1,252	302	0	91	20	0	839	40
[illegible]	1,180	0	0	1,017	163	0	0	32
[illegible]	1,234	0	0	0	740	494	0	44
[illegible]	3,836	0	0	65	3,771	0	0	48
[illegible]	41	34	na	49	41	39	44	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

CALIFORNIA

Science and Engineering Profile

	California	U.S.	Rank		California	U.S.	Rank
Doctoral scientists, 1993	54,713	430,332	1	Total R&D performance, 1993 (millions)	$33,721	$161,427	1
Doctoral engineers, 1993	13,424	81,293	1	Industry R&D, 1993 (millions)	$26,541	$117,622	1
S&E doctorates awarded, 1995	3,653	26,482	1	Academic R&D, 1994 (millions)	$2,464	$20,573	1
of which, in engineering	22%	23%		of which, in life sciences	58%	55%	
in life sciences	19%	24%		in engineering	13%	16%	
in psychology	19%	13%		in physical sciences	12%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	6,248	36,143	1	Higher education current-fund expenditures, 1993 (millions)	$19,709	$163,994	1
S&E graduate students, 1994				Number of SBIR awards, 1990-94	4,175	18,023	1
in doctorate-granting institutions	44,778	438,694	1	Patents issued to state residents, 1995	9,263	55,717	1
Population, 1995 (000s)	31,589	262,755	1	Gross state product, 1992 (billions)	$787.9	$5,994.1	1
Civilian labor force, 1995 (000s)	15,415	132,281	1	of which, agriculture	2%	2%	
				manufacturing, mining, construction	19%	23%	
Personal income per capita, 1995	$23,699	$22,788	13	transportation, communication, utilities	7%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	21%	18%	
Total expenditures, 1995 (millions)	$152,534	$1,326,294	1	services	23%	20%	
R&D obligations, 1994 (millions)	$11,280	$65,654	1	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in California by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	11,279,888	1,400,726	1,791,580	6,046,504	1,659,223	354,290	27,565	1
Department of Agriculture	79,673	56,659	0	320	22,219	475	0	3
Department of Commerce	36,871	15,534	285	10,406	10,435	63	148	7
Department of Defense	6,597,594	1,216,765	222,094	4,845,100	272,854	40,781	0	1
Department of Energy	1,012,937	15,397	778,438	114,309	88,150	16,643	0	2
Dept. of Health & Human Services	1,210,119	1,191	25,379	41,992	868,164	261,351	12,042	2
Department of the Interior	49,720	42,174	140	1,224	5,775	42	365	3
Department of Transportation	31,395	7,923	111	7,797	1,345	800	13,419	6
Environmental Protection Agency	15,035	0	0	9,050	4,717	0	1,268	7
Natl. Aeronautics & Space Admin.	1,962,011	45,083	764,789	983,870	151,572	16,622	75	1
National Science Foundation	284,533	0	344	32,436	233,992	17,513	248	1
State rank	1	3	1	1	1	2	2	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

COLORADO

Science and Engineering Profile

	Colorado	U.S.	Rank
Doctoral scientists, 1993	8,558	430,332	16
Doctoral engineers, 1993	1,683	81,293	15
S&E doctorates awarded, 1995	530	26,482	16
of which, in engineering	27%	23%	
in life sciences	24%	24%	
in social sciences	12%	15%	
S&E postdoctorates, 1994 in doctorate-granting institutions	757	36,143	14
S&E graduate students, 1994 in doctorate-granting institutions	9,155	438,694	16
Population, 1995 (000s)	3,747	262,755	25
Civilian labor force, 1995 (000s)	2,089	132,281	22
Personal income per capita, 1995	$23,449	$22,788	17
Federal spending			
Total expenditures, 1995 (millions)	$19,196	$1,326,294	25
R&D obligations, 1994 (millions)	$1,353	$65,654	16

	[illegible]	[illegible]	[illegible]
Total R&D performance, 1993 (millions)	$2,864	$161,427	15
Industry R&D, 1993 (millions)	$2,111	$117,622	15
Academic R&D, 1994 (millions)	$361	$20,573	19
of which, in life sciences	47%	55%	
in engineering	15%	16%	
in environmental sciences	13%	7%	
Higher education current-fund expenditures, 1993 (millions)	$1,978	$163,994	27
Number of SBIR awards, 1990-94	667	18,023	6
Patents issued to state residents, 1995	1,097	55,717	15
Gross state product, 1992 (billions)	$82.5	$5,994.1	23
of which, agriculture	2%	2%	
manufacturing, mining, construction	19%	23%	
transportation, communication, utilities	10%	9%	
wholesale and retail trade	17%	16%	
finance, insurance, real estate	17%	18%	
services	21%	20%	
government	14%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Colorado by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	[illegible]	[illegible]
Total, all agencies	1,353,410	196,169	144,546	726,547	232,097	48,304	5,747	16
Department of Agriculture	30,478	23,049	0	216	7,213	0	0	17
Department of Commerce	82,540	75,983	0	48	6,509	0	0	2
[illegible]	687,688	36,828	4,570	623,184	21,940	1,166	0	15
[illegible]	128,956	3,316	81,058	35,334	8,465	783	0	11
[illegible]	163,720	10	0	1,930	120,932	36,117	4,731	17
[illegible]	53,753	50,895	0	487	2,039	332	0	2
[illegible]	8,410	206	0	2,592	689	3,907	1,016	17
[illegible]	1,707	0	0	880	827	0	0	29
[illegible]	92,923	5,402	2,429	59,312	20,891	4,889	0	11
[illegible]	103,235	480	56,489	2,564	42,592	1,110	0	6
[illegible]	16	15	8	12	16	12	11	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

CONNECTICUT

Science and Engineering Profile

	Connecticut	U.S.	Rank
Doctoral scientists, 1993	7,131	430,332	21
Doctoral engineers, 1993	1,155	81,293	22
S&E doctorates awarded, 1995	407	26,482	23
of which, in life sciences	29%	24%	
in social sciences	22%	15%	
in physical sciences	19%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	1,049	36,143	10
S&E graduate students, 1994 in doctorate-granting institutions	4,971	438,694	28
Population, 1995 (000s)	3,275	262,755	28
Civilian labor force, 1995 (000s)	1,709	132,281	27
Personal income per capita, 1995	$30,303	$22,788	2
Federal spending			
Total expenditures, 1995 (millions)	$17,498	$1,326,294	28
R&D obligations, 1994 (millions)	$734	$65,654	21

	Connecticut	U.S.	Rank
Total R&D performance, 1993 (millions)	$2,809	$161,427	16
Industry R&D, 1993 (millions)	$2,373	$117,622	13
Academic R&D, 1994 (millions)	$372	$20,573	18
of which, in life sciences	71%	55%	
in engineering	10%	16%	
in physical sciences	7%	10%	
Higher education current-fund expenditures, 1993 (millions)	$2,419	$163,994	25
Number of SBIR awards, 1990-94	601	18,023	7
Patents issued to state residents, 1995	1,544	55,717	12
Gross state product, 1992 (billions)	$98.9	$5,994.1	21
of which, agriculture	1%	2%	
manufacturing, mining, construction	23%	23%	
transportation, communication, utilities	7%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	24%	18%	
services	21%	20%	
government	9%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Connecticut by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	733,512	43,055	0	429,026	238,359	17,587	5,485	22
Department of Agriculture	5,681	1,980	0	0	2,604	0	1,097	46
Department of Commerce	3,134	0	0	48	3,030	0	56	24
Department of Defense	398,476	29,969	0	349,562	18,945	0	0	18
Department of Energy	54,557	0	0	45,109	9,448	0	0	19
Dept. of Health & Human Services	207,362	10	0	3,203	184,682	16,889	2,578	14
Department of the Interior	1,436	1,138	0	198	100	0	0	49
Department of Transportation	16,681	9,958	0	4,726	326	0	1,671	8
Environmental Protection Agency	1,716	0	0	1,148	568	0	0	28
Nat'l Aeronautics & Space Admin.	25,256	0	0	23,762	1,402	92	0	20
National Science Foundation	19,213	0	0	1,270	17,254	606	83	24
State rank	22	35	na	15	15	22	12	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

DELAWARE

Science and Engineering Profile

	Delaware	U.S.	Rank		Delaware	U.S.	Rank
Doctoral scientists, 1993	3,466	430,332	34	Total R&D performance, 1993 (millions)	$1,247	$161,427	26
Doctoral engineers, 1993	686	81,293	32	Industry R&D, 1993 (millions)	$1,181	$117,622	20
S&E doctorates awarded, 1995	100	26,482	39	Academic R&D, 1994 (millions)	$51	$20,573	48
of which, in engineering	31%	23%		of which, in engineering	29%	16%	
in psychology	15%	13%		in life sciences	24%	55%	
in physical sciences	14%	14%		in physical sciences	18%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	85	36,143	39	Higher education current-fund expenditures, 1993 (millions)	$446	$163,994	46
S&E graduate students, 1994				Number of SBIR awards, 1990-94	58	18,023	31
in doctorate-granting institutions	1,760	438,694	40	Patents issued to state residents, 1995	427	55,717	28
Population, 1995 (000s)	717	262,755	46	Gross state product, 1992 (billions)	$23.7	$5,994.1	44
Civilian labor force, 1995 (000s)	381	132,281	46	of which, agriculture	1%	2%	
				manufacturing, mining, construction	24%	23%	
Personal income per capita, 1995	$24,124	$22,788	12	transportation, communication, utilities	5%	9%	
				wholesale and retail trade	9%	16%	
Federal spending				finance, insurance, real estate	39%	18%	
Total expenditures, 1995 (millions)	$3,272	$1,326,294	49	services	13%	20%	
R&D obligations, 1994 (millions)	$50	$65,654	47	government	8%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Delaware by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	50,441	9,326	0	9,532	27,036	4,019	528	47
Department of Agriculture	3,810	1,583	0	50	2,177	0	0	49
Department of Commerce	3,307	1,112	0	1,186	964	0	45	22
Department of Defense	16,446	2,759	0	4,492	9,195	0	0	40
Department of Energy	1,586	0	0	283	937	366	0	46
Department of Health and Human Services	6,871	0	0	883	4,622	1,234	132	46
[illegible]	759	634	0	0	125	0	0	51
[illegible]	5,103	3,238	0	1,462	52	0	351	24
[illegible]	1,242	0	0	325	917	0	0	31
[illegible]	2,954	0	0	786	646	1,522	0	38
[illegible]	8,363	0	0	65	7,401	897	0	40
[illegible]	47	47	na	45	44	38	51	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

DISTRICT OF COLUMBIA

Science and Engineering Profile

Doctoral scientists, 1993	12,763	430,332	11	Total R&D performance, 1993 (millions)	$2,543	$161,427	20
Doctoral engineers, 1993	1,068	81,293	24	Industry R&D, 1993 (millions)	$540	$117,622	27
S&E doctorates awarded, 1995	283	26,482	27	Academic R&D, 1994 (millions)	$152	$20,573	33
of which, in social sciences	37%	15%		of which, in life sciences	66%	55%	
in life sciences	19%	24%		in physical sciences	10%	10%	
in psychology	16%	13%		in social sciences	9%	4%	
S&E postdoctorates, 1994 in doctorate-granting institutions	172	36,143	32	Higher education current-fund expenditures, 1993 (millions)	$2,427	$163,994	24
S&E graduate students, 1994				Number of SBIR awards, 1990-94	51	18,023	33
in doctorate-granting institutions	9,728	438,694	13	Patents issued to state residents, 1995	57	55,717	48
Population, 1995 (000s)	554	262,755	50	Gross state product, 1992 (billions)	$40.4	$5,994.1	34
Civilian labor force, 1995 (000s)	283	132,281	50	of which, agriculture	0%	2%	
				manufacturing, mining, construction	4%	23%	
Personal income per capita, 1995	$32,274	$22,788	1	transportation, communication, utilities	6%	9%	
				wholesale and retail trade	5%	16%	
Federal spending				finance, insurance, real estate	12%	18%	
Total expenditures, 1995 (millions)	$21,776	$1,326,294	21	services	34%	20%	
R&D obligations, 1994 (millions)	$2,475	$65,654	9	government	39%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in District of Columbia by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	[illegible]
Total, all agencies	2,474,777	1,677,506	0	350,316	157,675	285,509	3,771	9
Department of Agriculture	163,363	156,192	0	6,208	792	133	38	1
Department of Commerce	8,896	8,389	0	15	413	79	0	15
Department of Defense	954,963	737,118	0	135,022	56,107	26,716	0	9
Department of Energy	325,620	280,999	0	36,856	2,920	4,845	0	7
Dept. of Health & Human Services	216,072	81,703	0	10,638	71,680	50,951	1,100	13
Department of the Interior	25,740	23,956	0	1,257	124	403	0	6
Department of Transportation	133,055	68,460	0	49,087	3,248	11,823	437	1
Environmental Protection Agency	155,680	23,253	0	14,519	226	115,566	2,116	1
Nat'l Aeronautics & Space Admin.	420,810	288,454	0	95,187	7,128	29,961	80	8
National Science Foundation	70,578	8,982	0	1,527	15,037	45,032	0	8
State rank	9	2	na	17	25	3	20	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

FLORIDA

Science and Engineering Profile

	Florida	U.S.	Rank		Florida	U.S.	Rank
Doctoral scientists, 1993	11,809	430,332	13	Total R&D performance, 1993 (millions)	$3,526	$161,427	12
Doctoral engineers, 1993	2,339	81,293	12	Industry R&D, 1993 (millions)	$2,425	$117,622	12
S&E doctorates awarded, 1995	670	26,482	11	Academic R&D, 1994 (millions)	$549	$20,573	12
of which, in engineering	21%	23%		of which, in life sciences	51%	55%	
in psychology	20%	13%		in physical sciences	14%	10%	
in life sciences	20%	24%		in engineering	13%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	558	36,143	20	expenditures, 1993 (millions)	$4,690	$163,994	10
S&E graduate students, 1994				Number of SBIR awards, 1990-94	376	18,023	12
in doctorate-granting institutions	18,220	438,694	8	Patents issued to state residents, 1995	2,002	55,717	10
Population, 1995 (000s)	14,166	262,755	4	Gross state product, 1992 (billions)	$268.6	$5,994.1	5
Civilian labor force, 1995 (000s)	6,830	132,281	4	of which, agriculture	2%	2%	
				manufacturing, mining, construction	13%	23%	
Personal income per capita, 1995	$22,916	$22,788	21	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	18%	16%	
Federal spending				finance, insurance, real estate	20%	18%	
Total expenditures, 1995 (millions)	$74,992	$1,326,294	4	services	23%	20%	
R&D obligations, 1994 (millions)	$2,906	$65,654	7	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Florida by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	2,906,333	585,886	0	2,047,291	263,964	4,421	4,771	7
Department of Agriculture	34,000	21,896	0	0	11,974	130	0	14
Department of Commerce	40,022	32,835	0	3,732	3,319	0	136	5
Department of Defense	2,122,465	294,791	0	1,781,797	45,742	135	0	5
Department of Energy	71,844	0	0	54,712	17,128	4	0	18
Dept. of Health & Human Services	128,971	0	0	5,219	119,668	2,460	1,624	22
Department of the Interior	11,898	10,925	0	79	894	0	0	17
Department of Transportation	6,058	175	0	2,736	514	0	2,633	19
Environmental Protection Agency	12,277	4,007	0	7,280	864	0	126	10
Nat'l Aeronautics & Space Admin.	429,133	221,257	0	191,131	16,068	425	252	7
National Science Foundation	49,665	0	0	605	47,793	1,267	0	12
State rank	7	7	na	4	12	37	13	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

GEORGIA

Science and Engineering Profile

	Georgia	U.S.	Rank				
Doctoral scientists, 1993	7,950	430,332	17	Total R&D performance, 1993 (millions)	$1,577	$161,427	25
Doctoral engineers, 1993	917	81,293	27	Industry R&D, 1993 (millions)	$860	$117,622	24
S&E doctorates awarded, 1995	496	26,482	17	Academic R&D, 1994 (millions)	$606	$20,573	11
of which, in life sciences	25%	24%		of which, in life sciences	50%	55%	
in engineering	24%	23%		in engineering	24%	16%	
in psychology	17%	13%		in physical sciences	8%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	490	36,143	23	Higher education current-fund expenditures, 1993 (millions)	$3,742	$163,994	13
S&E graduate students, 1994				Number of SBIR awards, 1990-94	133	18,023	25
in doctorate-granting institutions	9,173	438,694	15	Patents issued to state residents, 1995	847	55,717	20
Population, 1995 (000s)	7,201	262,755	10	Gross state product, 1992 (billions)	$153.5	$5,994.1	12
Civilian labor force, 1995 (000s)	3,618	132,281	11	of which, agriculture	2%	2%	
				manufacturing, mining, construction	22%	23%	
Personal income per capita, 1995	$21,278	$22,788	29	transportation, communication, utilities	11%	9%	
				wholesale and retail trade	18%	16%	
Federal spending				finance, insurance, real estate	16%	18%	
Total expenditures, 1995 (millions)	$33,121	$1,326,294	13	services	17%	20%	
R&D obligations, 1994 (millions)	$5,544	$65,654	3	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Georgia by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	[illegible]
Total, all agencies	5,544,354	222,335	0	5,048,945	238,575	30,610	3,889	3
Department of Agriculture	51,741	39,287	0	0	12,309	0	145	5
Department of Commerce	2,153	458	0	718	977	0	0	31
[illegible]	5,122,137	19,244	0	5,032,999	44,655	25,239	0	2
[illegible]	17,227	0	0	423	14,547	2,257	0	28
[illegible]	261,755	141,010	0	1,270	116,460	2,232	783	9
[illegible]	6,441	5,821	0	95	525	0	0	25
[illegible]	14,913	125	0	2,396	10,121	242	2,029	9
[illegible]	17,638	4,617	0	4,423	8,558	0	40	6
[illegible]	25,169	11,773	0	5,697	7,059	640	0	21
[illegible]	25,180	0	0	924	23,364	0	892	23
[illegible]	3	14	na	2	14	17	19	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

HAWAII

Science and Engineering Profile

Doctoral scientists, 1993	2,362	430,332	38	Total R&D performance, 1993 (millions)	$380	$161,427	39
Doctoral engineers, 1993	209	81,293	44	Industry R&D, 1993 (millions)	$255	$117,622	37
S&E doctorates awarded, 1995	125	26,482	38	Academic R&D, 1994 (millions)	$70	$20,573	42
of which, in social sciences	39%	15%		of which, in life sciences	42%	55%	
in life sciences	30%	24%		in physical sciences	29%	10%	
in environmental sciences	10%	3%		in environmental sciences	12%	7%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	59	36,143	42	expenditures, 1993 (millions)	$693	$163,994	41
S&E graduate students, 1994				Number of SBIR awards, 1990-94	69	18,023	29
in doctorate-granting institutions	2,326	438,694	37	Patents issued to state residents, 1995	66	55,717	46
Population, 1995 (000s)	1,187	262,755	40	Gross state product, 1992 (billions)	$33.2	$5,994.1	38
Civilian labor force, 1995 (000s)	580	132,281	42	of which, agriculture	1%	2%	
				manufacturing, mining, construction	10%	23%	
Personal income per capita, 1995	$24,738	$22,788	10	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	19%	18%	
Total expenditures, 1995 (millions)	$7,529	$1,326,294	39	services	23%	20%	
R&D obligations, 1994 (millions)	$140	$65,654	40	government	20%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Hawaii by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	[illegible]	[illegible]	[illegible]	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	140,305	61,156	0	11,210	55,606	11,375	958	40
Department of Agriculture	20,612	9,796	0	0	5,357	5,459	0	23
Department of Commerce	13,138	8,413	0	194	4,452	0	79	14
[illegible]	47,042	32,517	0	9,698	4,827	0	0	31
[illegible]	2,706	0	0	0	2,656	50	0	44
[illegible]	24,277	0	0	675	17,526	5,800	276	40
[illegible]	10,920	10,380	0	0	540	0	0	19
[illegible]	752	0	0	0	149	0	603	46
[illegible]	0	0	0	0	0	0	0	na
[illegible]	6,987	50	0	160	6,777	0	0	32
[illegible]	13,871	0	0	483	13,322	66	0	29
[illegible]	40	28	na	42	35	26	47	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

IDAHO

Science and Engineering Profile

	Idaho	U.S.	Rank		Idaho	U.S.	Rank
Doctoral scientists, 1993	1,800	430,332	42	Total R&D performance, 1993 (millions)	$477	$161,427	34
Doctoral engineers, 1993	403	81,293	36	Industry R&D, 1993 (millions)	$391	$117,622	32
S&E doctorates awarded, 1995	57	26,482	43	Academic R&D, 1994 (millions)	$55	$20,573	45
of which, in life sciences	56%	24%		of which, in life sciences	69%	55%	
in math & computer sciences	14%	8%		in engineering	14%	16%	
in engineering	12%	23%		in physical sciences	7%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	49	36,143	44	Higher education current-fund expenditures, 1993 (millions)	$497	$163,994	44
S&E graduate students, 1994				Number of SBIR awards, 1990-94	21	18,023	43
in doctorate-granting institutions	1,746	438,694	41	Patents issued to state residents, 1995	305	55,717	32
Population, 1995 (000s)	1,163	262,755	41	Gross state product, 1992 (billions)	$20.9	$5,994.1	46
Civilian labor force, 1995 (000s)	598	132,281	41	of which, agriculture	8%	2%	
				manufacturing, mining, construction	23%	23%	
Personal income per capita, 1995	$19,264	$22,788	39	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	17%	18%	
Total expenditures, 1995 (millions)	$5,320	$1,326,294	43	services	15%	20%	
R&D obligations, 1994 (millions)	$228	$65,654	32	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Idaho by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	227,773	29,373	73,879	105,070	17,980	323	1,148	32
Department of Agriculture	18,141	13,054	0	0	4,989	91	7	27
Department of Commerce	507	471	0	0	36	0	0	38
Department of Defense	12,186	4,150	3,899	3,185	952	0	0	44
Department of Energy	171,393	1,315	68,533	101,110	260	0	175	9
Dept. of Health & Human Services	1,780	0	0	369	795	230	386	50
Department of the Interior	12,232	9,589	1,447	66	1,128	2	0	16
Department of Transportation	5,774	550	0	0	4,644	0	580	21
Environmental Protection Agency	585	0	0	0	585	0	0	38
Natl Aeronautics & Space Admin	393	244	0	0	149	0	0	49
National Science Foundation	4,782	0	0	340	4,442	0	0	47
State rank	32	41	12	27	48	49	45	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

ILLINOIS

Science and Engineering Profile

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Doctoral scientists, 1993	17,727	430,332	7	Total R&D performance, 1993 (millions)	$6,768	$161,427	9
Doctoral engineers, 1993	2,957	81,293	8	Industry R&D, 1993 (millions)	$5,242	$117,622	7
S&E doctorates awarded, 1995	1,412	26,482	5	Academic R&D, 1994 (millions)	$803	$20,573	7
of which, in engineering	21%	23%		of which, in life sciences	50%	55%	
in life sciences	21%	24%		in physical sciences	12%	10%	
in social sciences	18%	15%		in engineering	11%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	1,176	36,143	8	expenditures, 1993 (millions)	$8,572	$163,994	5
S&E graduate students, 1994				Number of SBIR awards, 1990-94	280	18,023	16
in doctorate-granting institutions	21,737	438,694	6	Patents issued to state residents, 1995	2,874	55,717	4
Population, 1995 (000s)	11,830	262,755	6	Gross state product, 1992 (billions)	$294.4	$5,994.1	4
Civilian labor force, 1995 (000s)	6,083	132,281	5	of which, agriculture	2%	2%	
				manufacturing, mining, construction	23%	23%	
Personal income per capita, 1995	$24,763	$22,788	9	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	19%	18%	
Total expenditures, 1995 (millions)	$50,934	$1,326,294	7	services	20%	20%	
R&D obligations, 1994 (millions)	$1,080	$65,654	17	government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Illinois by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	[illegible]	[illegible]	[illegible]
Total, all agencies	1,079,973	85,416	436,956	85,475	423,291	42,810	6,025	17
Department of Agriculture	44,950	33,219	0	80	11,471	145	35	7
Department of Commerce	4,203	365	0	2,581	761	0	496	21
Department of Defense	159,694	46,240	4,359	59,051	49,533	511	0	25
Department of Energy	467,668	1,862	430,396	11,768	21,027	1,615	1,000	4
Dept. of Health & Human Services	255,716	399	547	6,080	211,207	36,558	925	12
Department of [illegible]	2,933	2,067	75	71	536	0	184	40
Department of [illegible]	9,295	19	1,478	2,911	1,250	635	3,002	16
[illegible]	1,796	0	0	713	700	0	383	24
Nat'l Aeronautics [illegible]	13,292	1,245	100	1,899	9,866	182	0	27
[illegible]	120,426	0	1	321	116,940	3,164	0	4
[illegible]	17	26	3	29	8	15	8	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

INDIANA

Science and Engineering Profile

Doctoral scientists, 1993	6,901	430,332	23	Total R&D performance, 1993 (millions)	$2,560	$161,427	19
Doctoral engineers, 1993	1,252	81,293	19	Industry R&D, 1993 (millions)	$2,177	$117,622	14
S&E doctorates awarded, 1995	690	26,482	10	Academic R&D, 1994 (millions)	$335	$20,573	21
of which, in engineering	26%	23%		of which, in life sciences	51%	55%	
in physical sciences	21%	14%		in physical sciences	18%	10%	
in life sciences	18%	24%		in engineering	16%	16%	
S&E postdoctorates, 1994 in doctorate-granting institutions	599	36,143	19	Higher education current-fund expenditures, 1993 (millions)	$3,612	$163,994	14
S&E graduate students, 1994 in doctorate-granting institutions	10,348	438,694	11	Number of SBIR awards, 1990-94	76	18,023	28
				Patents issued to state residents, 1995	1,111	55,717	14
Population, 1995 (000s)	5,803	262,755	14	Gross state product, 1992 (billions)	$121.6	$5,994.1	15
Civilian labor force, 1995 (000s)	3,134	132,281	14	of which, agriculture	2%	2%	
				manufacturing, mining, construction	34%	23%	
Personal income per capita, 1995	$21,273	$22,788	30	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	15%	18%	
Total expenditures, 1995 (millions)	$22,961	$1,326,294	18	services	15%	20%	
R&D obligations, 1994 (millions)	$404	$65,654	26	government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Indiana by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	403,611	96,071	0	122,674	176,141	5,816	2,909	26
Department of Agriculture	15,809	4,253	0	0	11,549	7	0	32
[illegible]	189	0	0	0	189	0	0	42
[illegible]	222,148	87,726	0	114,946	14,068	5,408	0	22
[illegible]	17,105	0	0	1,368	15,682	55	0	29
[illegible]	88,241	100	0	2,072	84,332	267	1,470	25
[illegible]	2,712	2,524	0	24	164	0	0	43
[illegible]	2,219	0	0	221	580	0	1,418	35
[illegible]	1,088	0	0	55	1,012	0	21	33
[illegible]	10,006	1,468	0	3,548	4,911	79	0	30
[illegible]	44,094	0	0	440	43,654	0	0	15
[illegible]	26	22	na	23	21	31	27	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

IOWA

Science and Engineering Profile

	Iowa	U.S.	Rank		Iowa	U.S.	Rank
Doctoral scientists, 1993	3,849	430,332	31	Total R&D performance, 1993 (millions)	$902	$161,427	28
Doctoral engineers, 1993	433	81,293	35	Industry R&D, 1993 (millions)	$533	$117,622	28
S&E doctorates awarded, 1995	444	26,482	21	Academic R&D, 1994 (millions)	$315	$20,573	23
of which, in life sciences	29%	24%		of which, in life sciences	62%	55%	
in engineering	27%	23%		in engineering	20%	16%	
in physical sciences	13%	14%		in physical sciences	7%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	543	36,143	21	expenditures, 1993 (millions)	$2,533	$163,994	22
S&E graduate students, 1994				Number of SBIR awards, 1990-94	31	18,023	40
in doctorate-granting institutions	5,590	438,694	27	Patents issued to state residents, 1995	421	55,717	29
Population, 1995 (000s)	2,842	262,755	30	Gross state product, 1992 (billions)	$59.5	$5,994.1	30
Civilian labor force, 1995 (000s)	1,559	132,281	29	of which, agriculture	7%	2%	
				manufacturing, mining, construction	26%	23%	
Personal income per capita, 1995	$21,012	$22,788	31	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	16%	18%	
Total expenditures, 1995 (millions)	$12,979	$1,326,294	32	services	15%	20%	
R&D obligations, 1994 (millions)	$224	$65,654	33	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Iowa by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	223,823	37,592	27,791	18,758	134,507	2,527	2,648	33
Department of Agriculture	40,127	25,437	0	80	14,610	0	0	9
Department of Commerce	2,496	0	0	580	1,916	0	0	28
Department of Defense	33,186	9,784	110	15,541	7,751	0	0	36
Department of Energy	31,992	0	27,088	1,695	3,209	0	0	22
Dept. of Health & Human Services	85,090	0	593	0	80,555	2,527	1,415	26
Department of the Interior	2,528	2,371	0	0	157	0	0	44
Department of Transportation	7,206	0	0	0	6,138	0	1,068	18
Environmental Protection Agency	1,259	0	0	125	969	0	165	30
Nat'l Aeronautics & Space Admin.	5,903	0	0	379	5,524	0	0	33
National Science Foundation	14,036	0	0	358	13,678	0	0	28
State rank	33	38	16	40	26	41	28	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

KANSAS

Science and Engineering Profile

Doctoral scientists, 1993	3,124	430,332	35	Total R&D performance, 1993 (millions)	$463	$161,427	36
Doctoral engineers, 1993	515	81,293	34	Industry R&D, 1993 (millions)	$292	$117,622	34
S&E doctorates awarded, 1995	260	26,482	29	Academic R&D, 1994 (millions)	$169	$20,573	32
of which, in life sciences	37%	24%		of which, in life sciences	62%	55%	
in engineering	20%	23%		in engineering	13%	16%	
in physical sciences	15%	14%		in physical sciences	9%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	310	36,143	28	Higher education current-fund expenditures, 1993 (millions)	$1,487	$163,994	32
S&E graduate students, 1994				Number of SBIR awards, 1990-94	32	18,023	39
in doctorate-granting institutions	6,129	438,694	23	Patents issued to state residents, 1995	246	55,717	36
Population, 1995 (000s)	2,565	262,755	32	Gross state product, 1992 (billions)	$56.2	$5,994.1	31
Civilian labor force, 1995 (000s)	1,330	132,281	31	of which, agriculture	5%	2%	
				manufacturing, mining, construction	23%	23%	
Personal income per capita, 1995	$21,825	$22,788	24	transportation, communication, utilities	11%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	15%	18%	
Total expenditures, 1995 (millions)	$12,440	$1,326,294	33	services	16%	20%	
R&D obligations, 1994 (millions)	$85	$65,654	43	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Kansas by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	84,823	15,157	0	11,173	55,119	1,095	2,279	44
Department of Agriculture	13,341	6,997	0	80	6,264	0	0	36
Department of Commerce	38	0	0	0	38	0	0	45
Department of Defense	14,972	4,944	0	6,534	3,494	0	0	42
Department of Energy	4,205	0	0	0	4,205	0	0	41
Dept. of Health & Human Services	31,500	0	0	863	28,239	1,095	1,303	36
Department of the Interior	3,353	3,214	0	39	100	0	0	38
Department of Transportation	1,942	0	0	94	872	0	976	37
Environmental Protection Agency	4,351	0	0	3,283	1,068	0	0	19
Nat'l Aeronautics & Space Admin.	2,595	2	0	180	2,413	0	0	39
National Science Foundation	8,526	0	0	100	8,426	0	0	39
State rank	44	45	na	43	36	47	33	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

KENTUCKY

Science and Engineering Profile

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Kentucky	U.S.	Rank
Doctoral scientists, 1993	3,780	430,332	32	Total R&D performance, 1993 (millions)	$429	$161,427	38
Doctoral engineers, 1993	360	81,293	39	Industry R&D, 1993 (millions)	$289	$117,622	35
S&E doctorates awarded, 1995	198	26,482	33	Academic R&D, 1994 (millions)	$126	$20,573	35
of which, in life sciences	37%	24%		of which, in life sciences	74%	55%	
in social sciences	19%	15%		in engineering	15%	16%	
in psychology	16%	13%		in physical sciences	3%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	230	36,143	30	Higher education current-fund expenditures, 1993 (millions)	$1,831	$163,994	29
S&E graduate students, 1994				Number of SBIR awards, 1990-94	28	18,023	42
in doctorate-granting institutions	3,487	438,694	34	Patents issued to state residents, 1995	272	55,717	34
Population, 1995 (000s)	3,860	262,755	24	Gross state product, 1992 (billions)	$75.6	$5,994.1	25
Civilian labor force, 1995 (000s)	1,861	132,281	25	of which, agriculture	3%	2%	
				manufacturing, mining, construction	32%	23%	
Personal income per capita, 1995	$18,612	$22,788	44	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$19,991	$1,326,294	23	services	14%	20%	
R&D obligations, 1994 (millions)	$89	$65,654	41	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Kentucky by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	88,635	8,049	0	14,159	63,939	262	2,226	42
[illegible]	11,263	1,495	0	0	9,768	0	0	38
[illegible]	68	0	0	1	67	0	0	44
[illegible]	7,561	4,746	0	1,400	1,415	0	0	45
[illegible]	18,490	0	0	11,935	6,480	0	75	27
[illegible]	39,287	0	0	821	37,557	262	647	31
[illegible]	2,354	1,808	0	0	293	0	250	45
[illegible]	1,240	0	0	0	66	0	1,174	41
[illegible]	526	0	0	0	446	0	80	40
[illegible]	1,479	0	0	0	1,479	0	0	43
[illegible]	6,367	0	0	2	6,365	0	0	42
[illegible]	42	49	na	41	33	50	34	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

LOUISIANA

Science and Engineering Profile

	Louisiana	U.S.	Rank		Louisiana	U.S.	Rank
Doctoral scientists, 1993	4,914	430,332	26	Total R&D performance, 1993 (millions)	$470	$161,427	35
Doctoral engineers, 1993	873	81,293	28	Industry R&D, 1993 (millions)	$170	$117,622	41
S&E doctorates awarded, 1995	300	26,482	26	Academic R&D, 1994 (millions)	$269	$20,573	26
of which, in life sciences	34%	24%		of which, in life sciences	63%	55%	
in engineering	17%	23%		in engineering	14%	16%	
in math & computer sciences	13%	8%		in environmental sciences	8%	7%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	336	36,143	26	expenditures, 1993 (millions)	$2,473	$163,994	23
S&E graduate students, 1994				Number of SBIR awards, 1990-94	54	18,023	32
in doctorate-granting institutions	5,992	438,694	25	Patents issued to state residents, 1995	370	55,717	31
Population, 1995 (000s)	4,342	262,755	21	Gross state product, 1992 (billions)	$96.2	$5,994.1	22
Civilian labor force, 1995 (000s)	1,956	132,281	24	of which, agriculture	1%	2%	
				manufacturing, mining, construction	35%	23%	
Personal income per capita, 1995	$18,827	$22,788	40	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	13%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$22,437	$1,326,294	20	services	15%	20%	
R&D obligations, 1994 (millions)	$205	$65,654	36	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Louisiana by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	205,055	49,604	0	40,037	111,073	1,976	2,365	36
Department of Agriculture	33,856	24,997	0	0	8,859	0	0	15
Department of Commerce	2,365	793	0	0	1,563	0	9	29
Department of Defense	62,754	5,661	0	32,887	24,206	0	0	30
Department of Energy	6,487	260	0	2,726	3,501	0	0	37
Dept. of Health & Human Services	60,718	2,271	0	337	55,649	1,976	485	29
Department of the Interior	17,792	15,582	0	141	2,069	0	0	11
Department of Transportation	1,470	0	0	20	195	0	1,255	39
Environmental Protection Agency	2,409	0	0	0	2,409	0	0	22
Nat'l Aeronautics & Space Admin.	5,856	40	0	3,297	2,314	0	205	34
National Science Foundation	11,348	0	0	629	10,308	0	411	31
State rank	36	33	na	35	29	42	31	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MAINE

Science and Engineering Profile

	Maine	U.S.	Rank		Maine	U.S.	Rank
Doctoral scientists, 1993	1,867	430,332	40	Total R&D performance, 1993 (millions)	$114	$161,427	47
Doctoral engineers, 1993	245	81,293	42	Industry R&D, 1993 (millions)	$59	$117,622	45
S&E doctorates awarded, 1995	28	26,482	49	Academic R&D, 1994 (millions)	$29	$20,573	50
of which, in life sciences	43%	24%		of which, in life sciences	54%	55%	
in engineering	18%	23%		in environmental sciences	24%	7%	
in physical sciences	18%	14%		in engineering	11%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	18	36,143	50	expenditures, 1993 (millions)	$599	$163,994	42
S&E graduate students, 1994				Number of SBIR awards, 1990-94	49	18,023	34
in doctorate-granting institutions	820	438,694	49	Patents issued to state residents, 1995	113	55,717	43
Population, 1995 (000s)	1,241	262,755	39	Gross state product, 1992 (billions)	$24.1	$5,994.1	43
Civilian labor force, 1995 (000s)	642	132,281	39	of which, agriculture	2%	2%	
				manufacturing, mining, construction	22%	23%	
Personal income per capita, 1995	$20,527	$22,788	35	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	18%	18%	
Total expenditures, 1995 (millions)	$6,540	$1,326,294	41	services	19%	20%	
R&D obligations, 1994 (millions)	$81	$65,654	45	government	14%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Maine by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	80,852	3,882	0	36,902	15,747	21,768	2,553	45
Department of Agriculture	5,863	1,227	0	0	4,636	0	0	44
Department of Commerce	3,297	606	0	0	2,560	0	131	23
Department of Defense	31,283	832	0	28,413	674	1,364	0	37
Department of Energy	7,701	0	0	6,529	1,172	0	0	35
Dept. of Health & Human Services	22,315	0	0	573	1,508	18,521	1,713	41
Department of the Interior	1,558	1,217	0	7	334	0	0	48
Department of Transportation	656	0	0	234	0	0	422	48
Environmental Protection Agency	1,757	0	0	900	775	0	82	25
Nat'l Aeronautics & Space Admin.	937	0	0	90	179	463	205	46
National Science Foundation	5,485	0	0	156	3,909	1,420	0	44
State rank	45	50	na	37	49	20	30	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MARYLAND

Science and Engineering Profile

	Maryland	U.S.	Rank
Doctoral scientists, 1993	17,765	430,332	6
Doctoral engineers, 1993	2,832	81,293	9
S&E doctorates awarded, 1995	604	26,482	15
of which, in life sciences	28%	24%	
in engineering	24%	23%	
in social sciences	14%	15%	
S&E postdoctorates, 1994 in doctorate-granting institutions	1,274	36,143	7
S&E graduate students, 1994 in doctorate-granting institutions	8,940	438,694	18
Population, 1995 (000s)	5,042	262,755	19
Civilian labor force, 1995 (000s)	2,723	132,281	18
Personal income per capita, 1995	$25,927	$22,788	6
Federal spending			
Total expenditures, 1995 (millions)	$36,847	$1,326,294	11
R&D obligations, 1994 (millions)	$6,653	$65,654	2

	Maryland	U.S.	Rank
Total R&D performance, 1993 (millions)	$7,442	$161,427	7
Industry R&D, 1993 (millions)	$2,076	$117,622	16
Academic R&D, 1994 (millions)	$1,130	$20,573	4
of which, in life sciences	39%	55%	
in engineering	23%	16%	
in physical sciences	16%	10%	
Higher education current-fund expenditures, 1993 (millions)	$3,453	$163,994	15
Number of SBIR awards, 1990-94	953	18,023	4
Patents issued to state residents, 1995	984	55,717	19
Gross state product, 1992 (billions)	$116.2	$5,994.1	16
of which, agriculture	1%	2%	
manufacturing, mining, construction	15%	23%	
transportation, communication, utilities	8%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	19%	18%	
services	23%	20%	
government	17%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Maryland by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	6,652,978	4,163,166	130,465	1,600,112	605,589	149,899	3,747	2
Department of Agriculture	114,075	101,482	0	3,010	8,975	437	171	2
Department of Commerce	277,022	267,217	0	4,567	5,032	50	156	1
Department of Defense	2,549,193	1,476,873	3,284	866,974	183,403	18,659	0	4
Department of Energy	79,783	51,890	0	12,891	14,242	760	0	15
Dept. of Health & Human Services	2,530,756	1,872,275	127,181	169,349	321,315	40,250	386	1
Department of the Interior	18,359	17,823	0	66	318	2	150	9
Department of Transportation	38,809	2,604	0	33,545	1,370	0	1,290	5
Environmental Protection Agency	8,617	0	0	6,276	1,669	0	672	14
Nat'l Aeronautics & Space Admin.	985,029	370,051	0	497,883	30,347	85,676	472	3
National Science Foundation	51,335	2,951	0	5,551	38,318	4,065	450	11
State rank	2	1	10	7	6	7	21	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MASSACHUSETTS

Science and Engineering Profile

Doctoral scientists, 1993	19,645	430,332	5	Total R&D performance, 1993 (millions)	$9,468	$161,427	4
Doctoral engineers, 1993	3,166	81,293	7	Industry R&D, 1993 (millions)	$6,952	$117,622	5
S&E doctorates awarded, 1995	1,445	26,482	4	Academic R&D, 1994 (millions)	$1,122	$20,573	5
of which, in engineering	25%	23%		of which, in life sciences	39%	55%	
in life sciences	21%	24%		in engineering	19%	16%	
in social sciences	19%	15%		in physical sciences	16%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	4,222	36,143	2	Higher education current-fund expenditures, 1993 (millions)	$7,456	$163,994	6
S&E graduate students, 1994 in doctorate-granting institutions	22,882	438,694	4	Number of SBIR awards, 1990-94	2,916	18,023	2
				Patents issued to state residents, 1995	2,161	55,717	9
Population, 1995 (000s)	6,074	262,755	13	Gross state product, 1992 (billions)	$162.0	$5,994.1	10
Civilian labor force, 1995 (000s)	3,168	132,281	13	of which, agriculture	1%	2%	
				manufacturing, mining, construction	21%	23%	
Personal income per capita, 1995	$26,994	$22,788	4	transportation, communication, utilities	7%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	21%	18%	
Total expenditures, 1995 (millions)	$35,858	$1,326,294	12	services	25%	20%	
R&D obligations, 1994 (millions)	$3,234	$65,654	6	government	9%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.
Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Massachusetts by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	[illegible]
Total, all agencies	3,234,051	341,397	277,699	1,226,730	825,912	548,924	13,389	6
Department of Agriculture	21,664	14,798	0	167	6,351	348	0	22
Department of Commerce	38,499	27,636	157	6,903	3,236	221	346	6
Department of Defense	1,819,521	236,242	272,012	1,082,232	185,216	43,819	0	7
Department of Energy	88,862	129	0	6,176	79,045	3,512	0	14
Dept. of Health & Human Services	901,577	29,448	0	71,902	347,446	446,827	5,954	4
Department of the Interior	6,471	5,349	0	315	807	0	0	24
Department of Transportation	41,788	25,159	0	8,636	2,453	0	5,540	4
Environmental Protection Agency	19,823	0	0	15,513	2,761	0	1,549	5
Nat'l Aeronautics & Space Admin.	126,941	2,090	5,388	25,808	49,418	44,237	0	10
National Science Foundation	168,905	546	142	9,078	149,179	9,960	0	3
State rank	6	11	5	8	3	1	3	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MICHIGAN

Science and Engineering Profile

	Michigan	U.S.	Rank		Michigan	U.S.	Rank
Doctoral scientists, 1993	11,796	430,332	14	Total R&D performance, 1993 (millions)	$10,778	$161,427	3
Doctoral engineers, 1993	2,684	81,293	10	Industry R&D, 1993 (millions)	$9,924	$117,622	2
S&E doctorates awarded, 1995	998	26,482	8	Academic R&D, 1994 (millions)	$730	$20,573	8
of which, in engineering	27%	23%		of which, in life sciences	54%	55%	
in life sciences	22%	24%		in engineering	18%	16%	
in social sciences	15%	15%		in social sciences	9%	4%	
S&E postdoctorates, 1994 in doctorate-granting institutions	1,148	36,143	9	Higher education current-fund expenditures, 1993 (millions)	$5,715	$163,994	8
S&E graduate students, 1994 in doctorate-granting institutions	17,350	438,694	9	Number of SBIR awards, 1990-94	302	18,023	15
				Patents issued to state residents, 1995	2,779	55,717	5
Population, 1995 (000s)	9,549	262,755	8	Gross state product, 1992 (billions)	$204.4	$5,994.1	9
Civilian labor force, 1995 (000s)	4,745	132,281	8	of which, agriculture	1%	2%	
				manufacturing, mining, construction	31%	23%	
Personal income per capita, 1995	$23,551	$22,788	16	transportation, communication, utilities	7%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	16%	18%	
Total expenditures, 1995 (millions)	$39,372	$1,326,294	9	services	18%	20%	
R&D obligations, 1994 (millions)	$770	$65,654	20	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Michigan by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	770,231	99,972	0	227,762	392,223	45,675	4,599	20
Department of Agriculture	22,977	7,872	0	80	15,025	0	0	21
Department of Commerce	19,905	6,777	0	11,762	803	422	141	11
Department of Defense	339,519	78,565	0	194,546	39,779	26,629	0	20
Department of Energy	14,234	0	0	814	13,323	97	0	31
Dept. of Health & Human Services	257,662	0	0	6,798	237,888	11,059	1,917	11
Department of the Interior	7,262	6,748	0	90	424	0	0	23
Department of Transportation	4,803	10	0	604	2,248	0	1,941	25
Environmental Protection Agency	12,541	0	0	7,752	4,189	0	600	9
Nat'l Aeronautics & Space Admin.	23,419	0	0	4,926	11,066	7,427	0	22
National Science Foundation	67,909	0	0	390	67,478	41	0	9
State rank	20	21	na	20	9	14	15	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MINNESOTA

Science and Engineering Profile

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Doctoral scientists, 1993	7,705	430,332	18	Total R&D performance, 1993 (millions)	$2,922	$161,427	14
Doctoral engineers, 1993	1,163	81,293	21	Industry R&D, 1993 (millions)	$2,458	$117,622	11
S&E doctorates awarded, 1995	475	26,482	18	Academic R&D, 1994 (millions)	$318	$20,573	22
of which, in life sciences	30%	24%		of which, in life sciences	69%	55%	
in engineering	24%	23%		in engineering	10%	16%	
in psychology	16%	13%		in math & computer sciences	7%	4%	
S&E postdoctorates, 1994 in doctorate-granting institutions	705	36,143	15	Higher education current-fund expenditures, 1993 (millions)	$3,099	$163,994	18
S&E graduate students, 1994				Number of SBIR awards, 1990-94	269	18,023	18
in doctorate-granting institutions	5,969	438,694	26	Patents issued to state residents, 1995	1,657	55,717	11
Population, 1995 (000s)	4,610	262,755	20	Gross state product, 1992 (billions)	$110.3	$5,994.1	18
Civilian labor force, 1995 (000s)	2,589	132,281	20	of which, agriculture	3%	2%	
				manufacturing, mining, construction	25%	23%	
Personal income per capita, 1995	$23,118	$22,788	20	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	18%	18%	
Total expenditures, 1995 (millions)	$18,825	$1,326,294	26	services	18%	20%	
R&D obligations, 1994 (millions)	$474	$65,654	24	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Minnesota by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	474,372	40,620	0	183,537	171,224	73,128	5,863	24
Department of Agriculture	24,263	14,963	0	160	9,074	0	66	20
Department of Commerce	2,727	0	0	2,274	453	0	0	26
Department of Defense	184,886	4,093	0	166,869	11,616	2,308	0	23
Department of Energy	6,867	0	0	0	6,867	0	0	36
Dept. of Health & Human Services	187,722	0	0	3,862	109,315	69,986	4,559	16
Department of the Interior	17,664	15,973	0	1,219	472	0	0	12
Department of Transportation	5,284	0	0	3,017	1,154	0	1,113	23
Environmental Protection Agency	10,376	5,591	0	3,001	1,659	0	125	12
Nat'l Aeronautics & Space Admin.	4,152	0	0	2,009	2,079	64	0	36
National Science Foundation	30,431	0	0	1,126	28,535	770	0	21
State rank	24	36	na	21	22	10	9	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MISSISSIPPI

Science and Engineering Profile

	Mississippi	U.S.	Rank		Mississippi	U.S.	Rank
Doctoral scientists, 1993	2,453	430,332	36	Total R&D performance, 1993 (millions)	$325	$161,427	41
Doctoral engineers, 1993	533	81,293	33	Industry R&D, 1993 (millions)	$52	$117,622	46
S&E doctorates awarded, 1995	172	26,482	36	Academic R&D, 1994 (millions)	$114	$20,573	36
of which, in life sciences	37%	24%		of which, in life sciences	54%	55%	
in psychology	24%	13%		in engineering	19%	16%	
in engineering	16%	23%		in physical sciences	12%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	93	36,143	37	Higher education current-fund expenditures, 1993 (millions)	$1,219	$163,994	35
S&E graduate students, 1994				Number of SBIR awards, 1990-94	15	18,023	44
in doctorate-granting institutions	3,096	438,694	35	Patents issued to state residents, 1995	105	55,717	45
Population, 1995 (000s)	2,697	262,755	31	Gross state product, 1992 (billions)	$44.3	$5,994.1	32
Civilian labor force, 1995 (000s)	1,258	132,281	32	of which, agriculture	3%	2%	
				manufacturing, mining, construction	29%	23%	
Personal income per capita, 1995	$16,531	$22,788	51	transportation, communication, utilities	12%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$14,233	$1,326,294	30	services	12%	20%	
R&D obligations, 1994 (millions)	$256	$65,654	31	government	14%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.
Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Mississippi by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	255,734	124,493	0	81,135	41,411	4,974	3,721	31
Department of Agriculture	49,570	35,530	0	0	13,252	788	0	6
Department of Commerce	56,948	6,153	0	49,999	558	0	238	4
Department of Defense	82,538	58,776	0	14,911	6,816	2,035	0	29
Department of Energy	3,673	223	0	1,284	2,166	0	0	43
Dept. of Health & Human Services	14,060	0	0	129	11,507	349	2,075	44
Department of the Interior	2,959	2,460	0	0	499	0	0	39
Department of Transportation	2,009	950	0	0	179	0	880	36
Environmental Protection Agency	538	0	0	0	50	0	488	39
Nat'l Aeronautics & Space Admin.	38,281	20,263	0	14,812	1,404	1,802	0	16
National Science Foundation	5,158	138	0	0	4,980	0	40	45
State rank	31	19	na	30	40	36	22	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MISSOURI

Science and Engineering Profile

	Missouri	U.S.	Rank		Missouri	U.S.	Rank
Doctoral scientists, 1993	7,671	430,332	19	Total R&D performance, 1993 (millions)	$1,789	$161,427	23
Doctoral engineers, 1993	1,126	81,293	23	Industry R&D, 1993 (millions)	$1,375	$117,622	18
S&E doctorates awarded, 1995	411	26,482	22	Academic R&D, 1994 (millions)	$375	$20,573	17
of which, in life sciences	27%	24%		of which, in life sciences	77%	55%	
in engineering	25%	23%		in engineering	8%	16%	
in psychology	17%	13%		in physical sciences	6%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	767	36,143	13	expenditures, 1993 (millions)	$3,249	$163,994	17
S&E graduate students, 1994				Number of SBIR awards, 1990-94	80	18,023	27
in doctorate-granting institutions	6,920	438,694	21	Patents issued to state residents, 1995	670	55,717	23
Population, 1995 (000s)	5,324	262,755	16	Gross state product, 1992 (billions)	$111.6	$5,994.1	17
Civilian labor force, 1995 (000s)	2,832	132,281	16	of which, agriculture	2%	2%	
				manufacturing, mining, construction	24%	23%	
Personal income per capita, 1995	$21,627	$22,788	27	transportation, communication, utilities	11%	9%	
				wholesale and retail trade	18%	16%	
Federal spending				finance, insurance, real estate	16%	18%	
Total expenditures, 1995 (millions)	$31,418	$1,326,294	14	services	19%	20%	
R&D obligations, 1994 (millions)	$2,272	$65,654	10	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Missouri by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	2,271,683	58,262	0	1,971,805	220,545	17,416	3,655	10
Department of Agriculture	19,067	6,642	0	80	12,345	0	0	26
Department of Commerce	426	136	0	32	172	86	0	39
Department of Defense	2,010,504	37,455	0	1,963,358	8,854	837	0	6
Department of Energy	5,513	0	0	20	4,799	694	0	40
Dept. of Health & Human Services	191,928	27	0	1,420	173,673	14,816	1,992	15
[illegible]	15,262	13,957	0	345	960	0	0	13
[illegible]	2,506	0	0	604	239	0	1,663	33
[illegible]	1,723	0	0	1,411	312	0	0	27
[illegible]	8,946	45	0	4,340	4,491	70	0	31
[illegible]	15,808	0	0	195	14,700	913	0	27
[illegible]	10	30	na	5	17	23	23	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

MONTANA

Science and Engineering Profile

	Montana	U.S.	Rank		Montana	U.S.	Rank
Doctoral scientists, 1993	1,581	430,332	44	Total R&D performance, 1993 (millions)	$85	$161,427	49
Doctoral engineers, 1993	111	81,293	48	Industry R&D, 1993 (millions)	$14	$117,622	49
S&E doctorates awarded, 1995	47	26,482	47	Academic R&D, 1994 (millions)	$53	$20,573	46
of which, in life sciences	34%	24%		of which, in life sciences	67%	55%	
in physical sciences	19%	14%		in physical sciences	9%	10%	
in psychology	17%	13%		in engineering	9%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	27	36,143	48	expenditures, 1993 (millions)	$377	$163,994	48
S&E graduate students, 1994				Number of SBIR awards, 1990-94	31	18,023	40
in doctorate-granting institutions	1,296	438,694	44	Patents issued to state residents, 1995	122	55,717	42
Population, 1995 (000s)	870	262,755	44	Gross state product, 1992 (billions)	$15.2	$5,994.1	47
Civilian labor force, 1995 (000s)	436	132,281	44	of which, agriculture	6%	2%	
				manufacturing, mining, construction	18%	23%	
Personal income per capita, 1995	$18,482	$22,788	45	transportation, communication, utilities	13%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	17%	18%	
Total expenditures, 1995 (millions)	$4,808	$1,326,294	45	services	17%	20%	
R&D obligations, 1994 (millions)	$56	$65,654	46	government	15%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Montana by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	56,420	28,782	0	3,873	21,368	1,018	1,379	46
Department of Agriculture	14,687	9,912	0	0	4,704	71	0	34
Department of Commerce	400	0	0	0	400	0	0	40
Department of Defense	1,264	64	0	142	1,023	35	0	50
Department of Energy	3,789	480	0	2,959	100	0	250	42
Dept. of Health & Human Services	19,386	13,261	0	162	4,796	912	255	43
Department of the Interior	5,546	5,030	0	67	449	0	0	30
Department of Transportation	874	0	0	0	0	0	874	45
Environmental Protection Agency	134	0	0	0	134	0	0	45
Natl. Aeronautics & Space Admin.	1,722	35	0	543	1,144	0	0	41
National Science Foundation	8,618	0	0	0	8,618	0	0	38
State rank	46	42	na	48	46	48	42	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEBRASKA

Science and Engineering Profile

	Nebraska	U.S.	Rank
Doctoral scientists, 1993	2,416	430,332	37
Doctoral engineers, 1993	288	81,293	41
S&E doctorates awarded, 1995	141	26,482	37
of which, in life sciences	43%	24%	
in psychology	16%	13%	
in physical sciences	13%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	167	36,143	33
S&E graduate students, 1994 in doctorate-granting institutions	2,472	438,694	36
Population, 1995 (000s)	1,637	262,755	37
Civilian labor force, 1995 (000s)	897	132,281	35
Personal income per capita, 1995	$21,703	$22,788	26
Federal spending			
Total expenditures, 1995 (millions)	$7,692	$1,326,294	38
R&D obligations, 1994 (millions)	$85	$65,654	43

	Nebraska	U.S.	Rank
Total R&D performance, 1993 (millions)	$295	$161,427	43
Industry R&D, 1993 (millions)	$128	$117,622	42
Academic R&D, 1994 (millions)	$146	$20,573	34
of which, in life sciences	78%	55%	
in engineering	10%	16%	
in physical sciences	5%	10%	
Higher education current-fund expenditures, 1993 (millions)	$1,256	$163,994	34
Number of SBIR awards, 1990-94	33	18,023	38
Patents issued to state residents, 1995	136	55,717	40
Gross state product, 1992 (billions)	$37.2	$5,994.1	35
of which, agriculture	10%	2%	
manufacturing, mining, construction	16%	23%	
transportation, communication, utilities	10%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	17%	18%	
services	16%	20%	
government	15%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Nebraska by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	85,176	27,942	0	6,440	42,931	5,788	2,075	43
Department of Agriculture	26,382	17,898	0	0	8,484	0	0	18
Department of Commerce	114	0	0	0	114	0	0	43
Department of Defense	19,504	6,894	0	5,033	7,577	0	0	39
Department of Energy	1,364	0	0	550	814	0	0	48
Dept. Health & Human Services	25,483	0	0	78	18,255	5,788	1,362	38
[illegible]	3,640	3,150	0	0	490	0	0	36
[illegible]	733	0	0	0	40	0	693	47
[illegible]	45	0	0	0	25	0	20	47
[illegible]	1,656	0	0	311	1,345	0	0	42
[illegible]	6,255	0	0	468	5,787	0	0	43
State rank	43	43	na	47	37	32	35	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEVADA

Science and Engineering Profile

Doctoral scientists, 1993	1,300	430,332	47	Total R&D performance, 1993 (millions)	$218	$161,427	45
Doctoral engineers, 1993	229	81,293	43	Industry R&D, 1993 (millions)	$67	$117,622	44
S&E doctorates awarded, 1995	54	26,482	44	Academic R&D, 1994 (millions)	$83	$20,573	39
of which, in life sciences	26%	24%		of which, in environmental sciences	34%	7%	
in engineering	22%	23%		in life sciences	28%	55%	
in environmental sciences	19%	3%		in engineering	12%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	53	36,143	43	expenditures, 1993 (millions)	$383	$163,994	47
S&E graduate students, 1994				Number of SBIR awards, 1990-94	38	18,023	37
in doctorate-granting institutions	1,587	438,694	43	Patents issued to state residents, 1995	167	55,717	38
Population, 1995 (000s)	1,530	262,755	38	Gross state product, 1992 (billions)	$36.8	$5,994.1	36
Civilian labor force, 1995 (000s)	801	132,281	36	of which, agriculture	1%	2%	
				manufacturing, mining, construction	15%	23%	
Personal income per capita, 1995	$25,013	$22,788	8	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	13%	16%	
Federal spending				finance, insurance, real estate	17%	18%	
Total expenditures, 1995 (millions)	$6,628	$1,326,294	40	services	36%	20%	
R&D obligations, 1994 (millions)	$348	$65,654	28	government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Nevada by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	347,665	51,140	0	270,869	22,616	1,295	1,745	28
Department of Agriculture	3,133	964	0	0	2,169	0	0	50
Department of Commerce	580	0	0	0	84	0	496	37
Department of Defense	33,347	28,852	0	3,097	1,300	98	0	35
Department of Energy	263,080	75	0	260,438	2,567	0	0	8
Dept. of Health & Human Services	7,828	0	0	0	6,183	1,160	485	45
Department of the Interior	17,984	15,567	0	215	2,202	0	0	10
Department of Transportation	3,975	0	0	3,450	0	0	525	28
Environmental Protection Agency	10,219	5,580	0	3,483	917	0	239	13
Nat'l Aeronautics & Space Admin.	652	102	0	123	427	0	0	48
National Science Foundation	6,867	0	0	63	6,767	37	0	41
State rank	28	32	na	18	45	45	38	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEW HAMPSHIRE

Science and Engineering Profile

Doctoral scientists, 1993	1,845	430,332	41	Total R&D performance, 1993 (millions)	$438	$161,427	37
Doctoral engineers, 1993	364	81,293	38	Industry R&D, 1993 (millions)	$248	$117,622	38
S&E doctorates awarded, 1995	87	26,482	40	Academic R&D, 1994 (millions)	$102	$20,573	37
of which, in life sciences	38%	24%		of which, in life sciences	52%	55%	
in physical sciences	26%	14%		in environmental sciences	24%	7%	
in engineering	13%	23%		in engineering	10%	16%	
S&E postdoctorates, 1994 in doctorate-granting institutions	98	36,143	36	Higher education current-fund expenditures, 1993 (millions)	$791	$163,994	39
S&E graduate students, 1994				Number of SBIR awards, 1990-94	195	18,023	23
in doctorate-granting institutions	1,150	438,694	46	Patents issued to state residents, 1995	404	55,717	30
Population, 1995 (000s)	1,148	262,755	42	Gross state product, 1992 (billions)	$25.5	$5,994.1	42
Civilian labor force, 1995 (000s)	633	132,281	40	of which, agriculture	1%	2%	
				manufacturing, mining, construction	25%	23%	
Personal income per capita, 1995	$25,151	$22,788	7	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	21%	18%	
Total expenditures, 1995 (millions)	$4,856	$1,326,294	44	services	20%	20%	
R&D obligations, 1994 (millions)	$219	$65,654	34	government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in New Hampshire by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	218,891	32,599	0	116,029	67,885	1,769	609	34
Department of Agriculture	5,000	2,324	0	80	2,596	0	0	48
Department of Commerce	742	0	0	0	701	0	41	36
Department of Defense	148,698	26,161	0	110,055	11,585	897	0	26
Department of Energy	1,502	0	0	0	1,497	5	0	47
Dept. of Health & Human Services	35,335	0	0	1,172	33,138	867	158	34
Department of the Interior	1,318	1,078	0	0	240	0	0	50
Department of Transportation	1,856	1,442	0	4	0	0	410	38
Environmental Protection Agency	333	0	0	0	333	0	0	42
Nat'l Aeronautics & Space Admin.	14,146	211	0	4,465	9,470	0	0	25
National Science Foundation	9,961	1,383	0	253	8,325	0	0	36
State rank	34	40	na	25	32	43	49	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEW JERSEY

Science and Engineering Profile

	New Jersey	U.S.	Rank		New Jersey	U.S.	Rank
Doctoral scientists, 1993	16,898	430,332	8	Total R&D performance, 1993 (millions)	$9,182	$161,427	5
Doctoral engineers, 1993	4,180	81,293	4	Industry R&D, 1993 (millions)	$8,162	$117,622	4
S&E doctorates awarded, 1995	627	26,482	13	Academic R&D, 1994 (millions)	$406	$20,573	16
of which, in engineering	22%	23%		of which, in life sciences	45%	55%	
in life sciences	20%	24%		in engineering	17%	16%	
in physical sciences	17%	14%		in physical sciences	11%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	619	36,143	18	expenditures, 1993 (millions)	$3,798	$163,994	12
S&E graduate students, 1994				Number of SBIR awards, 1990-94	581	18,023	9
in doctorate-granting institutions	10,091	438,634	12	Patents issued to state residents, 1995	2,753	55,717	6
Population, 1995 (000s)	7,945	262,755	9	Gross state product, 1992 (billions)	$223.1	$5,994.1	8
Civilian labor force, 1995 (000s)	4,064	132,281	9	of which, agriculture	1%	2%	
				manufacturing, mining, construction	20%	23%	
Personal income per capita, 1995	$28,858	$22,788	3	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	21%	18%	
Total expenditures, 1995 (millions)	$37,587	$1,326,294	10	services	22%	20%	
R&D obligations, 1994 (millions)	$1,392	$65,654	15	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in New Jersey by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	1,391,942	438,937	102,134	632,130	200,007	14,020	4,714	15
Department of Agriculture	6,999	888	0	0	6,111	0	0	41
Department of Commerce	23,470	17,067	0	2,852	3,370	48	133	10
Department of Defense	844,521	374,285	183	421,584	44,559	3,910	0	12
Department of Energy	127,413	0	101,843	13,622	11,851	97	0	12
Dept. of Health & Human Services	103,296	0	0	9,998	82,469	9,210	1,619	23
Department of the Interior	4,351	2,900	0	797	151	0	503	33
Department of Transportation	85,443	43,490	0	37,589	1,927	0	2,437	2
Environmental Protection Agency	2,381	0	0	563	1,818	0	0	23
Nat'l Aeronautics & Space Admin.	149,077	307	0	142,206	6,182	382	0	9
National Science Foundation	44,991	0	108	2,919	41,569	373	22	14
State rank	15	9	11	14	18	25	14	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEW MEXICO

Science and Engineering Profile

	New Mexico	U.S.	Rank		New Mexico	U.S.	Rank
Doctoral scientists, 1993	5,386	430,332	25	Total R&D performance, 1993 (millions)	$2,752	$161,427	17
Doctoral engineers, 1993	1,697	81,293	14	Industry R&D, 1993 (millions)	$962	$117,622	23
S&E doctorates awarded, 1995	176	26,482	35	Academic R&D, 1994 (millions)	$192	$20,573	30
of which, in engineering	29%	23%		of which, in engineering	49%	16%	
in life sciences	22%	24%		in life sciences	26%	55%	
in physical sciences	14%	14%		in environmental sciences	8%	7%	
S&E postdoctorates, 1994 in doctorate-granting institutions	84	36,143	40	Higher education current-fund expenditures, 1993 (millions)	$1,103	$163,994	36
S&E graduate students, 1994				Number of SBIR awards, 1990-94	366	18,023	13
in doctorate-granting institutions	3,549	438,694	33	Patents issued to state residents, 1995	255	55,717	35
Population, 1995 (000s)	1,685	262,755	36	Gross state product, 1992 (billions)	$31.9	$5,994.1	39
Civilian labor force, 1995 (000s)	788	132,281	38	of which, agriculture	3%	2%	
				manufacturing, mining, construction	24%	23%	
Personal income per capita, 1995	$18,055	$22,788	48	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	14%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$11,794	$1,326,294	34	services	18%	20%	
R&D obligations, 1994 (millions)	$1,894	$65,654	12	government	18%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in New Mexico by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	1,894,083	381,366	1,263,387	158,263	83,308	5,688	2,071	12
Department of Agriculture	6,587	2,896	0	0	3,616	75	0	43
Department of Commerce	30	0	0	0	30	0	0	46
Department of Defense	603,738	319,808	139,707	124,686	19,036	501	0	16
Department of Energy	1,178,992	33,552	1,115,870	20,537	8,095	938	0	1
Dept. of Health & Human Services	36,718	1,294	6,478	1,817	23,017	2,947	1,165	33
Department of the Interior	5,616	4,855	450	60	251	0	0	29
Department of Transportation	5,664	4,285	0	242	231	0	906	22
Environmental Protection Agency	857	0	0	675	182	0	0	36
Nat'l Aeronautics & Space Admin.	45,072	14,044	882	9,595	20,362	189	0	14
National Science Foundation	10,809	632	0	651	8,488	1,038	0	33
State rank	12	10	2	22	30	33	36	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NEW YORK

Science and Engineering Profile

	New York	U.S.	Rank
Doctoral scientists, 1993	36,882	430,332	2
Doctoral engineers, 1993	5,410	81,293	3
S&E doctorates awarded, 1995	2,471	26,482	2
of which, in life sciences	23%	24%	
in social sciences	18%	15%	
in engineering	17%	23%	
S&E postdoctorates, 1994 in doctorate-granting institutions	2,878	36,143	3
S&E graduate students, 1994 in doctorate-granting institutions	40,781	438,694	2
Population, 1995 (000s)	18,136	262,755	3
Civilian labor force, 1995 (000s)	8,493	132,281	3
Personal income per capita, 1995	$26,782	$22,788	5
Federal spending			
Total expenditures, 1995 (millions)	$93,781	$1,326,294	2
R&D obligations, 1994 (millions)	$2,699	$65,654	8

	New York	U.S.	Rank
Total R&D performance, 1993 (millions)	$10,975	$161,427	2
Industry R&D, 1993 (millions)	$8,820	$117,622	3
Academic R&D, 1994 (millions)	$1,660	$20,573	2
of which, in life sciences	64%	55%	
in engineering	13%	16%	
in physical sciences	9%	10%	
Higher education current-fund expenditures, 1993 (millions)	$15,634	$163,994	2
Number of SBIR awards, 1990-94	858	18,023	5
Patents issued to state residents, 1995	4,684	55,717	2
Gross state product, 1992 (billions)	$497.6	$5,994.1	2
of which, agriculture	1%	2%	
manufacturing, mining, construction	17%	23%	
transportation, communication, utilities	8%	9%	
wholesale and retail trade	14%	16%	
finance, insurance, real estate	26%	18%	
services	23%	20%	
government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in New York by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	2,698,717	151,024	197,809	1,027,741	1,046,333	195,939	79,871	8
Department of Agriculture	32,753	15,190	0	374	16,249	940	0	16
Department of Commerce	7,220	696	145	3,724	2,550	2	103	17
Department of Defense	889,190	107,955	6,290	664,693	103,346	6,906	0	10
Department of Energy	569,090	18,139	184,510	312,758	52,190	1,493	0	3
Dept. of Health & Human Services	934,914	220	3,872	15,878	665,974	174,501	74,469	3
Department of the Interior	6,396	5,050	0	768	561	0	17	26
Department of Transportation	12,594	0	0	7,844	233	33	4,484	12
Environmental Protection Agency	5,879	0	0	3,080	2,165	0	634	16
Nat'l Aeronautics & Space Admin.	44,276	3,774	1,810	14,989	22,451	1,187	65	15
National Science Foundation	196,405	0	1,182	3,633	180,614	10,877	99	2
State rank	8	17	7	9	2	4	1	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NORTH CAROLINA

Science and Engineering Profile

	N. Carolina	U.S.	Rank		N. Carolina	U.S.	Rank
Doctoral scientists, 1993	12,189	430,332	12	Total R&D performance, 1993 (millions)	$2,745	$161,427	18
Doctoral engineers, 1993	1,388	81,293	16	Industry R&D, 1993 (millions)	$1,929	$117,622	17
S&E doctorates awarded, 1995	691	26,482	9	Academic R&D, 1994 (millions)	$658	$20,573	9
of which, in life sciences	35%	24%		of which, in life sciences	71%	55%	
in engineering	20%	23%		in engineering	10%	16%	
in social sciences	14%	15%		in social sciences	5%	4%	
S&E postdoctorates, 1994 in doctorate-granting institutions	1,372	36,143	6	Higher education current-fund expenditures, 1993 (millions)	$5,012	$163,994	9
S&E graduate students, 1994				Number of SBIR awards, 1990-94	209	18,023	22
in doctorate-granting institutions	9,570	438,694	14	Patents issued to state residents, 1995	1,038	55,717	16
Population, 1995 (000s)	7,195	262,755	11	Gross state product, 1992 (billions)	$159.6	$5,994.1	11
Civilian labor force, 1995 (000s)	3,636	132,281	10	of which, agriculture	2%	2%	
				manufacturing, mining, construction	34%	23%	
Personal income per capita, 1995	$20,604	$22,788	34	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$30,656	$1,326,294	15	services	14%	20%	
R&D obligations, 1994 (millions)	$734	$65,654	21	government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in North Carolina by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	734,323	112,716	0	113,980	448,777	45,822	13,028	21
Department of Agriculture	34,665	18,579	0	3	16,065	18	0	13
Department of Commerce	13,907	6,532	0	1,156	6,075	0	144	13
Department of Defense	133,173	45,651	0	45,428	40,023	2,071	0	27
Department of Energy	13,107	895	0	1,399	9,413	1,400	0	32
Dept. of Health & Human Services	359,925	852	0	10,791	307,325	38,120	2,837	7
Department of the Interior	3,662	3,147	0	8	357	0	150	35
Department of Transportation	4,648	13	0	53	2,711	0	1,871	26
Environmental Protection Agency	117,578	36,820	0	52,993	19,739	0	8,026	2
Nat'l Aeronautics & Space Admin.	10,462	127	0	1,748	6,668	1,919	0	29
National Science Foundation	43,196	100	0	401	40,401	2,294	0	16
State rank	21	20	na	26	7	13	4	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

NORTH DAKOTA

Science and Engineering Profile

	N. Dakota	U.S.	Rank
Doctoral scientists, 1993	1,107	430,332	48
Doctoral engineers, 1993	147	81,293	47
S&E doctorates awarded, 1995	53	26,482	45
of which, in life sciences	42%	24%	
in psychology	26%	13%	
in physical sciences	15%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	45	36,143	45
S&E graduate students, 1994 in doctorate-granting institutions	999	438,694	47
Population, 1995 (000s)	641	262,755	47
Civilian labor force, 1995 (000s)	334	132,281	47
Personal income per capita, 1995	$18,663	$22,788	43
Federal spending			
Total expenditures, 1995 (millions)	$3,777	$1,326,294	48
R&D obligations, 1994 (millions)	$50	$65,654	47

	N. Dakota	U.S.	Rank
Total R&D performance, 1993 (millions)	$91	$161,427	48
Industry R&D, 1993 (millions)	$9	$117,622	51
Academic R&D, 1994 (millions)	$56	$20,573	44
of which, in life sciences	52%	55%	
in engineering	24%	16%	
in physical sciences	9%	10%	
Higher education current-fund expenditures, 1993 (millions)	$453	$163,994	45
Number of SBIR awards, 1990-94	12	18,023	46
Patents issued to state residents, 1995	58	55,717	47
Gross state product, 1992 (billions)	$13.1	$5,994.1	49
of which, agriculture	12%	2%	
manufacturing, mining, construction	15%	23%	
transportation, communication, utilities	9%	9%	
wholesale and retail trade	18%	16%	
finance, insurance, real estate	15%	18%	
services	15%	20%	
government	15%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in North Dakota by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	49,580	25,504	0	597	21,109	1,270	1,100	48
Department of Agriculture	25,753	19,863	0	0	5,890	0	0	19
Department of Commerce	387	0	0	0	0	0	387	41
Department of Defense	1,725	20	0	452	1,253	0	0	49
Department of Energy	6,145	0	0	0	6,145	0	0	38
Dept. of Health & Human Services	4,485	0	0	0	3,033	1,270	182	48
Department of the Interior	5,973	5,621	0	13	339	0	0	28
Department of Transportation	531	0	0	0	0	0	531	50
Environmental Protection Agency	2,497	0	0	55	2,442	0	0	21
Nat'l Aeronautics & Space Admin.	318	0	0	77	241	0	0	51
National Science Foundation	1,766	0	0	0	1,766	0	0	51
State rank	48	44	na	51	47	46	46	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

OHIO

Science and Engineering Profile

	Ohio	U.S.	Rank
Doctoral scientists, 1993	14,727	430,332	9
Doctoral engineers, 1993	3,888	81,293	5
S&E doctorates awarded, 1995	1,065	26,482	7
of which, in engineering	28%	23%	
in life sciences	23%	24%	
in physical sciences	17%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	968	36,143	12
S&E graduate students, 1994 in doctorate-granting institutions	22,084	438,694	5
Population, 1995 (000s)	11,151	262,755	7
Civilian labor force, 1995 (000s)	5,584	132,281	7
Personal income per capita, 1995	$22,021	$22,788	22
Federal spending			
Total expenditures, 1995 (millions)	$50,543	$1,326,294	8
R&D obligations, 1994 (millions)	$1,734	$65,654	14

	Ohio	U.S.	Rank
Total R&D performance, 1993 (millions)	$6,395	$161,427	10
Industry R&D, 1993 (millions)	$5,144	$117,622	8
Academic R&D, 1994 (millions)	$623	$20,573	10
of which, in life sciences	51%	55%	
in engineering	27%	16%	
in physical sciences	9%	10%	
Higher education current-fund expenditures, 1993 (millions)	$6,086	$163,994	7
Number of SBIR awards, 1990-94	468	18,023	11
Patents issued to state residents, 1995	2,418	55,717	8
Gross state product, 1992 (billions)	$241.6	$5,994.1	7
of which, agriculture	1%	2%	
manufacturing, mining, construction	30%	23%	
transportation, communication, utilities	8%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	16%	18%	
services	18%	20%	
government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Ohio by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	1,734,371	585,982	0	732,833	333,732	77,365	4,459	14
Department of Agriculture	16,521	7,274	0	6	9,226	8	7	29
Department of Commerce	2,906	0	0	1,972	913	21	0	25
Department of Defense	814,577	289,826	0	455,216	51,259	18,276	0	14
Department of Energy	25,550	0	0	16,407	7,397	1,746	0	23
Dept. of Health & Human Services	259,485	13,173	0	10,292	187,556	47,419	1,045	10
Department of the Interior	3,801	3,122	0	0	679	0	0	34
Department of Transportation	11,456	5,194	0	876	1,404	1,523	2,459	13
Environmental Protection Agency	47,838	22,096	0	6,489	18,522	0	731	3
Nat'l Aeronautics & Space Admin.	516,892	245,297	0	240,739	22,267	8,372	217	6
National Science Foundation	35,345	0	0	836	34,509	0	0	19
State rank	14	6	na	11	10	9	16	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

OKLAHOMA

Science and Engineering Profile

	Oklahoma	U.S.	Rank
Doctoral scientists, 1993	3,945	430,332	30
Doctoral engineers, 1993	928	81,293	26
S&E doctorates awarded, 1995	227	26,482	31
of which, in engineering	30%	23%	
in life sciences	20%	24%	
in psychology	16%	13%	
S&E postdoctorates, 1994 in doctorate-granting institutions	157	36,143	34
S&E graduate students, 1994 in doctorate-granting institutions	4,737	438,694	30
Population, 1995 (000s)	3,278	262,755	27
Civilian labor force, 1995 (000s)	1,547	132,281	30
Personal income per capita, 1995	$18,152	$22,788	47
Federal spending			
Total expenditures, 1995 (millions)	$16,086	$1,326,294	29
R&D obligations, 1994 (millions)	$141	$65,654	39

	Oklahoma	U.S.	Rank
Total R&D performance, 1993 (millions)	$533	$161,427	32
Industry R&D, 1993 (millions)	$311	$117,622	33
Academic R&D, 1994 (millions)	$175	$20,573	31
of which, in life sciences	46%	55%	
in engineering	22%	16%	
in physical sciences	9%	10%	
Higher education current-fund expenditures, 1993 (millions)	$1,443	$163,994	33
Number of SBIR awards, 1990-94	49	18,023	34
Patents issued to state residents, 1995	472	55,717	26
Gross state product, 1992 (billions)	$60.2	$5,994.1	29
of which, agriculture	3%	2%	
manufacturing, mining, construction	24%	23%	
transportation, communication, utilities	10%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	15%	18%	
services	16%	20%	
government	16%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Oklahoma by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	141,471	53,850	0	36,364	41,567	8,005	1,685	39
Department of Agriculture	16,702	9,253	0	0	7,414	0	35	28
Department of Commerce	6,423	5,488	0	785	150	0	0	18
Department of Defense	30,727	16,646	0	11,763	2,318	0	0	38
Department of Energy	25,428	1,931	0	20,802	2,695	0	0	24
Dept. of Health & Human Services	25,327	0	0	626	16,520	7,665	516	39
Department of the Interior	2,827	2,620	0	0	172	0	35	41
Department of Transportation	18,090	14,733	0	1,548	710	0	1,099	7
Environmental Protection Agency	4,403	3,179	0	807	417	0	0	18
Nat'l Aeronautics & Space Admin.	875	0	0	33	641	201	0	47
National Science Foundation	10,669	0	0	0	10,530	139	0	35
State rank	39	31	na	38	39	29	39	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

OREGON

Science and Engineering Profile

	Oregon	U.S.	[illegible]		Oregon	U.S.	[illegible]
Doctoral scientists, 1993	5,871	430,332	24	Total R&D performance, 1993 (millions)	$774	$161,427	29
Doctoral engineers, 1993	789	81,293	30	Industry R&D, 1993 (millions)	$471	$117,622	30
S&E doctorates awarded, 1995	301	26,482	25	Academic R&D, 1994 (millions)	$243	$20,573	27
of which, in life sciences	35%	24%		of which, in life sciences	59%	55%	
in social sciences	15%	15%		in environmental sciences	13%	7%	
in physical sciences	14%	14%		in physical sciences	9%	10%	
S&E postdoctorates, 1994 in doctorate-granting institutions	311	36,143	27	Higher education current-fund expenditures, 1993 (millions)	$1,868	$163,994	28
S&E graduate students, 1994				Number of SBIR awards, 1990-94	215	18,023	21
in doctorate-granting institutions	4,421	438,694	31	Patents issued to state residents, 1995	705	55,717	22
Population, 1995 (000s)	3,141	262,755	29	Gross state product, 1992 (billions)	$62.7	$5,994.1	28
Civilian labor force, 1995 (000s)	1,650	132,281	28	of which, agriculture	4%	2%	
				manufacturing, mining, construction	22%	23%	
Personal income per capita, 1995	$21,736	$22,788	25	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	17%	16%	
Federal spending				finance, insurance, real estate	18%	18%	
Total expenditures, 1995 (millions)	$13,756	$1,326,294	31	services	18%	20%	
R&D obligations, 1994 (millions)	$279	$65,654	30	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Oregon by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	279,164	60,178	0	44,341	132,350	34,824	7,471	30
Department of Agriculture	35,229	22,013	0	29	12,812	214	161	12
Department of Commerce	15,004	9,309	0	3,881	1,742	0	72	12
Department of Defense	38,068	1,366	0	25,936	10,333	433	0	34
Department of Energy	15,021	1,175	0	3,450	9,871	0	525	30
Dept. of Health & Human Services	95,614	0	0	3,137	62,039	29,110	1,328	24
Department of the Interior	22,072	20,905	0	384	683	0	100	8
Department of Transportation	4,378	0	0	38	3,473	0	867	27
Environmental Protection Agency	11,801	5,168	0	4,324	2,064	0	245	11
Nat'l Aeronautics & Space Admin.	14,522	242	0	2,018	3,550	4,539	4,173	24
National Science Foundation	27,455	0	0	1,144	25,783	528	0	22
State rank	30	29	na	33	27	16	6	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

PENNSYLVANIA

Science and Engineering Profile

	Penn.	U.S.	Rank
Doctoral scientists, 1993	20,012	430,332	4
Doctoral engineers, 1993	3,886	81,293	6
S&E doctorates awarded, 1995	1,358	26,482	6
of which, in engineering	30%	23%	
in life sciences	20%	24%	
in social sciences	16%	15%	
S&E postdoctorates, 1994 in doctorate-granting institutions	1,852	36,143	5
S&E graduate students, 1994 in doctorate-granting institutions	20,096	438,694	7
Population, 1995 (000s)	12,072	262,755	5
Civilian labor force, 1995 (000s)	5,838	132,281	6
Personal income per capita, 1995	$23,279	$22,788	19
Federal spending			
Total expenditures, 1995 (millions)	$64,281	$1,326,294	5
R&D obligations, 1994 (millions)	$1,981	$65,654	11

	Penn.	U.S.	Rank
Total R&D performance, 1993 (millions)	$8,278	$161,427	6
Industry R&D, 1993 (millions)	$6,711	$117,622	6
Academic R&D, 1994 (millions)	$1,085	$20,573	6
of which, in life sciences	55%	55%	
in engineering	20%	16%	
in math & computer sciences	7%	4%	
Higher education current-fund expenditures, 1993 (millions)	$9,672	$163,994	3
Number of SBIR awards, 1990-94	580	18,023	10
Patents issued to state residents, 1995	2,645	55,717	7
Gross state product, 1992 (billions)	$267.0	$5,994.1	6
of which, agriculture	1%	2%	
manufacturing, mining, construction	24%	23%	
transportation, communication, utilities	9%	9%	
wholesale and retail trade	15%	16%	
finance, insurance, real estate	19%	18%	
services	21%	20%	
government	10%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.
Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Pennsylvania by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	1,980,531	332,027	26,201	721,534	712,513	182,499	5,757	11
Department of Agriculture	40,272	29,696	0	0	10,566	10	0	8
Department of Commerce	4,583	0	600	2,601	486	847	49	20
Department of Defense	867,248	206,939	25,601	443,832	141,717	49,159	0	11
Department of Energy	347,614	66,763	0	240,074	21,322	19,455	0	6
Dept. of Health & Human Services	526,645	12	0	5,544	419,509	101,093	487	5
Department of the Interior	35,801	27,037	0	6,650	2,084	30	0	4
Department of Transportation	13,025	1,580	0	3,467	3,968	262	3,748	11
Environmental Protection Agency	2,671	0	0	265	1,885	0	521	20
Nat'l Aeronautics & Space Admin.	36,292	0	0	17,049	19,170	73	0	18
National Science Foundation	106,380	0	0	2,052	91,806	11,570	952	5
State rank	11	12	17	13	4	5	10	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

RHODE ISLAND

Science and Engineering Profile

	R.I.	U.S.	Rank		R.I.	U.S.	Rank
Doctoral scientists, 1993	1,976	430,332	39	Total R&D performance, 1993 (millions)	$484	$161,427	33
Doctoral engineers, 1993	317	81,293	40	Industry R&D, 1993 (millions)	$176	$117,622	40
S&E doctorates awarded, 1995	178	26,482	34	Academic R&D, 1994 (millions)	$102	$20,573	37
of which, in life sciences	21%	24%		of which, in life sciences	31%	55%	
in engineering	19%	23%		in environmental sciences	27%	7%	
in social sciences	17%	15%		in engineering	14%	16%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	146	36,143	35	expenditures, 1993 (millions)	$921	$163,994	38
S&E graduate students, 1994				Number of SBIR awards, 1990-94	59	18,023	30
in doctorate-granting institutions	2,207	438,694	38	Patents issued to state residents, 1995	206	55,717	37
Population, 1995 (000s)	990	262,755	43	Gross state product, 1992 (billions)	$21.6	$5,994.1	45
Civilian labor force, 1995 (000s)	485	132,281	43	of which, agriculture	1%	2%	
				manufacturing, mining, construction	23%	23%	
Personal income per capita, 1995	$23,310	$22,788	18	transportation, communication, utilities	6%	9%	
				wholesale and retail trade	14%	16%	
Federal spending				finance, insurance, real estate	22%	18%	
Total expenditures, 1995 (millions)	$5,763	$1,326,294	42	services	22%	20%	
R&D obligations, 1994 (millions)	$433	$65,654	25	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Rhode Island by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	433,488	238,837	0	116,114	57,866	18,668	2,003	25
Department of Agriculture	2,159	2	0	80	2,038	39	0	51
Department of Commerce	2,710	513	0	405	1,740	0	52	27
Department of Defense	357,060	231,923	0	113,695	11,297	145	0	19
Department of Energy	2,518	0	0	51	2,443	24	0	45
Dept. of Health & Human Services	38,774	0	0	139	20,358	16,872	1,405	32
Department of the Interior	1,700	1,247	0	0	453	0	0	47
Department of Transportation	1,046	402	0	113	0	0	531	44
Environmental Protection Agency	7,247	4,750	0	1,175	1,307	0	15	15
Nat'l Aeronautics & Space Admin.	3,589	0	0	456	2,989	144	0	37
National Science Foundation	16,685	0	0	0	15,241	1,444	0	26
State rank	25	13	na	24	34	21	37	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

SOUTH CAROLINA

Science and Engineering Profile

	S. Carolina	U.S.	Rank		S. Carolina	U.S.	Rank
Doctoral scientists, 1993	4,106	430,332	29	Total R&D performance, 1993 (millions)	$713	$161,427	31
Doctoral engineers, 1993	770	81,293	31	Industry R&D, 1993 (millions)	$495	$117,622	29
S&E doctorates awarded, 1995	199	26,482	32	Academic R&D, 1994 (millions)	$197	$20,573	29
of which, in life sciences	32%	24%		of which, in life sciences	51%	55%	
in engineering	20%	23%		in engineering	19%	16%	
in physical sciences	17%	14%		in environmental sciences	7%	7%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	239	36,143	29	expenditures, 1993 (millions)	$1,996	$163,994	26
S&E graduate students, 1994				Number of SBIR awards, 1990-94	7	18,023	47
in doctorate-granting institutions	4,220	438,694	32	Patents issued to state residents, 1995	441	55,717	27
Population, 1995 (000s)	3,673	262,755	26	Gross state product, 1992 (billions)	$69.8	$5,994.1	27
Civilian labor force, 1995 (000s)	1,859	132,281	26	of which, agriculture	1%	2%	
				manufacturing, mining, construction	31%	23%	
Personal income per capita, 1995	$18,788	$22,788	41	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$17,814	$1,326,294	27	services	14%	20%	
R&D obligations, 1994 (millions)	$199	$65,654	37	government	16%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in South Carolina by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	198,537	35,613	59,084	24,594	69,383	6,528	3,335	37
Department of Agriculture	16,131	9,087	0	0	7,044	0	0	31
Department of Commerce	8,848	5,774	0	1,659	1,325	0	90	16
Department of Defense	45,312	18,005	1,901	11,793	7,780	5,833	0	32
Department of Energy	79,044	0	57,183	9,088	12,474	299	0	16
Dept. of Health & Human Services	33,470	50	0	1,420	29,831	150	2,019	35
Department of the Interior	2,827	2,697	0	8	122	0	0	41
Department of Transportation	1,180	0	0	0	140	0	1,040	42
Environmental Protection Agency	521	0	0	0	521	0	0	41
Nat'l Aeronautics & Space Admin.	1,927	0	0	626	928	187	186	40
National Science Foundation	9,277	0	0	0	9,218	59	0	37
State rank	37	39	13	39	31	30	25	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

SOUTH DAKOTA

Science and Engineering Profile

	S. Dakota	U.S.	Rank
Doctoral scientists, 1993	975	430,332	50
Doctoral engineers, 1993	81	81,293	51
S&E doctorates awarded, 1995	17	26,482	51
of which, in life sciences	41%	24%	
in psychology	24%	13%	
in social sciences	18%	15%	
S&E postdoctorates, 1994 in doctorate-granting institutions	21	36,143	49
S&E graduate students, 1994 in doctorate-granting institutions	1,210	438,694	45
Population, 1995 (000s)	729	262,755	45
Civilian labor force, 1995 (000s)	382	132,281	45
Personal income per capita, 1995	$19,506	$22,788	38
Federal spending			
Total expenditures, 1995 (millions)	$3,829	$1,326,294	47
R&D obligations, 1994 (millions)	$26	$65,654	51

	S. Dakota	U.S.	Rank
Total R&D performance, 1993 (millions)	$58	$161,427	51
Industry R&D, 1993 (millions)	$22	$117,622	47
Academic R&D, 1994 (millions)	$22	$20,573	51
of which, in life sciences	58%	55%	
in environmental sciences	17%	7%	
in engineering	13%	16%	
Higher education current-fund expenditures, 1993 (millions)	$303	$163,994	50
Number of SBIR awards, 1990-94	2	18,023	51
Patents issued to state residents, 1995	33	55,717	51
Gross state product, 1992 (billions)	$15.1	$5,994.1	47
of which, agriculture	13%	2%	
manufacturing, mining, construction	14%	23%	
transportation, communication, utilities	8%	9%	
wholesale and retail trade	17%	16%	
finance, insurance, real estate	22%	18%	
services	15%	20%	
government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in South Dakota by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	26,481	10,979	0	2,710	9,893	1,346	1,553	51
Department of Agriculture	5,754	2,326	0	0	3,428	0	0	45
Department of Commerce	0	0	0	0	0	0	0	na
Department of Defense	601	8	0	40	553	0	0	51
Department of Energy	25	0	0	0	25	0	0	51
Dept. of Health & Human Services	4,658	774	0	255	1,338	1,346	945	47
Department of the Interior	6,138	3,602	0	2,238	298	0	0	27
Department of Transportation	619	0	0	11	0	0	608	49
Environmental Protection Agency	99	0	0	0	99	0	0	46
Nat'l Aeronautics & Space Admin.	5,485	4,269	0	166	1,050	0	0	35
National Science Foundation	3,102	0	0	0	3,102	0	0	50
State rank	51	46	na	50	51	44	41	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

TENNESSEE

Science and Engineering Profile

	Tennessee	U.S.	Rank		Tennessee	U.S.	Rank
Doctoral scientists, 1993	7,145	430,332	20	Total R&D performance, 1993 (millions)	$1,214	$161,427	27
Doctoral engineers, 1993	1,382	81,293	17	Industry R&D, 1993 (millions)	$792	$117,622	26
S&E doctorates awarded, 1995	336	26,482	24	Academic R&D, 1994 (millions)	$306	$20,573	24
of which, in life sciences	28%	24%		of which, in life sciences	58%	55%	
in engineering	21%	23%		in engineering	17%	16%	
in psychology	18%	13%		in physical sciences	7%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	523	36,143	22	expenditures, 1993 (millions)	$3,002	$163,994	19
S&E graduate students, 1994				Number of SBIR awards, 1990-94	182	18,023	24
in doctorate-granting institutions	7,366	438,694	20	Patents issued to state residents, 1995	593	55,717	24
Population, 1995 (000s)	5,256	262,755	17	Gross state product, 1992 (billions)	$108.9	$5,994.1	20
Civilian labor force, 1995 (000s)	2,712	132,281	19	of which, agriculture	2%	2%	
				manufacturing, mining, construction	28%	23%	
Personal income per capita, 1995	$20,376	$22,788	37	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	18%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$26,175	$1,326,294	17	services	18%	20%	
R&D obligations, 1994 (millions)	$676	$65,654	23	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Tennessee by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	675,621	93,026	306,103	80,219	164,428	29,279	2,566	23
Department of Agriculture	10,162	737	0	80	9,340	5	0	39
Department of Commerce	1,161	805	255	0	101	0	0	33
Department of Defense	122,233	80,694	9,964	17,329	14,052	194	0	28
Department of Energy	348,549	1,069	287,838	51,954	7,184	504	0	5
Dept. of Health & Human Services	139,541	726	1,302	1,294	115,458	20,290	471	20
Department of the Interior	3,438	2,784	0	82	572	0	0	37
Department of Transportation	9,512	2,661	3,944	230	582	0	2,095	15
Environmental Protection Agency	1,056	0	0	841	215	0	0	34
Nat'l Aeronautics & Space Admin.	28,528	3,527	2,800	8,147	5,800	8,254	0	19
National Science Foundation	11,441	23	0	262	11,124	32	0	30
State rank	23	25	4	31	24	18	29	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

TEXAS

Science and Engineering Profile

	Texas	U.S.	Rank
Doctoral scientists, 1993	22,836	430,332	3
Doctoral engineers, 1993	5,671	81,293	2
S&E doctorates awarded, 1995	1,708	26,482	3
of which, in engineering	27%	23%	
in life sciences	25%	24%	
in physical sciences	14%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	2,128	36,143	4
S&E graduate students, 1994 in doctorate-granting institutions	27,594	438,694	3
Population, 1995 (000s)	18,724	262,755	2
Civilian labor force, 1995 (000s)	9,568	132,281	2
Personal income per capita, 1995	$20,654	$22,788	33
Federal spending			
Total expenditures, 1995 (millions)	$83,296	$1,326,294	3
R&D obligations, 1994 (millions)	$3,658	$65,654	5

	Texas	U.S.	Rank
Total R&D performance, 1993 (millions)	$6,966	$161,427	8
Industry R&D, 1993 (millions)	$4,882	$117,622	9
Academic R&D, 1994 (millions)	$1,466	$20,573	3
of which, in life sciences	59%	55%	
in engineering	17%	16%	
in physical sciences	9%	10%	
Higher education current-fund expenditures, 1993 (millions)	$8,699	$163,994	4
Number of SBIR awards, 1990-94	596	18,023	8
Patents issued to state residents, 1995	3,886	55,717	3
Gross state product, 1992 (billions)	$416.9	$5,994.1	3
of which, agriculture	2%	2%	
manufacturing, mining, construction	25%	23%	
transportation, communication, utilities	11%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	16%	18%	
services	18%	20%	
government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Texas by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	3,658,329	564,827	332	2,282,216	635,598	166,564	8,792	5
Department of Agriculture	64,403	45,592	0	140	18,609	0	62	4
Department of Commerce	6,345	2,420	0	2,019	1,589	118	199	19
Department of Defense	1,429,954	143,903	332	1,086,625	87,888	111,206	0	8
Department of Energy	38,831	0	0	10,061	24,875	3,895	0	21
Dept. of Health & Human Services	438,983	78	0	6,933	394,714	34,480	2,778	6
Department of the Interior	7,569	6,608	0	392	464	105	0	22
Department of Transportation	10,347	225	0	3,849	1,630	42	4,601	14
Environmental Protection Agency	14,021	0	0	7,531	5,338	0	1,152	8
Nat'l Aeronautics & Space Admin.	1,575,589	366,001	0	1,163,303	29,916	16,369	0	2
National Science Foundation	72,287	0	0	1,363	70,575	349	0	7
State rank	5	8	18	3	5	6	5	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

UTAH

Science and Engineering Profile

	Utah	U.S.	Rank		Utah	U.S.	Rank
Doctoral scientists, 1993	3,509	430,332	33	Total R&D performance, 1993 (millions)	$753	$161,427	30
Doctoral engineers, 1993	809	81,293	29	Industry R&D, 1993 (millions)	$411	$117,622	31
S&E doctorates awarded, 1995	279	26,482	28	Academic R&D, 1994 (millions)	$201	$20,573	28
of which, in engineering	30%	23%		of which, in life sciences	46%	55%	
in psychology	19%	13%		in engineering	24%	16%	
in physical sciences	17%	14%		in environmental sciences	10%	7%	
S&E postdoctorates, 1994 in doctorate-granting institutions	219	36,143	31	Higher education current-fund expenditures, 1993 (millions)	$1,629	$163,994	31
S&E graduate students, 1994				Number of SBIR awards, 1990-94	245	18,023	20
in doctorate-granting institutions	4,830	438,694	29	Patents issued to state residents, 1995	508	55,717	25
Population, 1995 (000s)	1,951	262,755	34	Gross state product, 1992 (billions)	$35.6	$5,994.1	37
Civilian labor force, 1995 (000s)	971	132,281	34	of which, agriculture	2%	2%	
				manufacturing, mining, construction	23%	23%	
Personal income per capita, 1995	$18,223	$22,788	46	transportation, communication, utilities	10%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	15%	18%	
Total expenditures, 1995 (millions)	$8,526	$1,326,294	37	services	19%	20%	
R&D obligations, 1994 (millions)	$326	$65,654	29	government	15%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Utah by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	325,650	95,844	0	96,878	125,920	5,630	1,378	29
Department of Agriculture	14,142	8,802	0	0	5,337	0	3	35
Department of Commerce	1,716	0	0	1,261	205	0	250	32
Department of Defense	178,524	75,628	0	68,518	34,378	0	0	24
Department of Energy	9,662	0	0	879	4,483	4,300	0	34
Dept. of Health & Human Services	62,116	0	0	3,415	56,905	1,330	466	28
Department of the Interior	12,779	11,414	0	387	978	0	0	15
Department of Transportation	14,452	0	0	12,858	935	0	659	10
Environmental Protection Agency	0	0	0	0	0	0	0	na
Nat'l Aeronautics & Space Admin.	13,448	0	0	8,986	4,462	0	0	26
National Science Foundation	18,811	0	0	574	18,237	0	0	25
State rank	29	24	na	28	28	34	43	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

VERMONT

Science and Engineering Profile

	Vermont	U.S.	Rank
Doctoral scientists, 1993	1,436	430,332	46
Doctoral engineers, 1993	200	81,293	45
S&E doctorates awarded, 1995	44	26,482	48
of which, in life sciences	45%	24%	
in psychology	32%	13%	
in physical sciences	16%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	90	36,143	38
S&E graduate students, 1994 in doctorate-granting institutions	681	438,694	50
Population, 1995 (000s)	585	262,755	49
Civilian labor force, 1995 (000s)	320	132,281	48
Personal income per capita, 1995	$20,927	$22,788	32
Federal spending			
Total expenditures, 1995 (millions)	$2,671	$1,326,294	50
R&D obligations, 1994 (millions)	$48	$65,654	49

	Vermont	U.S.	Rank
Total R&D performance, 1993 (millions)	$343	$161,427	40
Industry R&D, 1993 (millions)	$284	$117,622	36
Academic R&D, 1994 (millions)	$52	$20,573	47
of which, in life sciences	90%	55%	
in engineering	4%	16%	
in physical sciences	2%	10%	
Higher education current-fund expenditures, 1993 (millions)	$599	$163,994	42
Number of SBIR awards, 1990-94	47	18,023	36
Patents issued to state residents, 1995	148	55,717	39
Gross state product, 1992 (billions)	$11.8	$5,994.1	51
of which, agriculture	3%	2%	
manufacturing, mining, construction	23%	23%	
transportation, communication, utilities	7%	9%	
wholesale and retail trade	16%	16%	
finance, insurance, real estate	18%	18%	
services	20%	20%	
government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.
Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Vermont by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	47,880	3,379	0	6,955	33,727	3,274	545	49
Department of Agriculture	5,625	1,696	0	0	3,929	0	0	47
Department of Commerce	18	0	0	0	18	0	0	47
Department of Defense	6,260	49	0	5,705	506	0	0	46
Department of Energy	544	0	0	0	544	0	0	49
Dept. of Health & Human Services	29,267	0	0	760	25,058	3,274	175	37
Department of the Interior	1,789	1,634	0	55	100	0	0	46
Department of Transportation	370	0	0	0	0	0	370	51
Environmental Protection Agency	204	0	0	0	204	0	0	44
Nat'l Aeronautics & Space Admin.	347	0	0	204	143	0	0	50
National Science Foundation	3,456	0	0	231	3,225	0	0	49
State rank	49	51	na	46	42	40	50	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

VIRGINIA

Science and Engineering Profile

	Virginia	U.S.	Rank		Virginia	U.S.	Rank
Doctoral scientists, 1993	12,802	430,332	10	Total R&D performance, 1993 (millions)	$2,939	$161,427	13
Doctoral engineers, 1993	2,630	81,293	11	Industry R&D, 1993 (millions)	$1,087	$117,622	21
S&E doctorates awarded, 1995	663	26,482	12	Academic R&D, 1994 (millions)	$436	$20,573	15
of which, in engineering	28%	23%		of which, in life sciences	51%	55%	
in life sciences	21%	24%		in engineering	18%	16%	
in social sciences	13%	15%		in environmental sciences	13%	7%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	654	36,143	16	expenditures, 1993 (millions)	$3,822	$163,994	11
S&E graduate students, 1994				Number of SBIR awards, 1990-94	960	18,023	3
in doctorate-granting institutions	12,353	438,694	10	Patents issued to state residents, 1995	822	55,717	21
Population, 1995 (000s)	6,618	262,755	12	Gross state product, 1992 (billions)	$153.8	$5,994.1	12
Civilian labor force, 1995 (000s)	3,496	132,281	12	of which, agriculture	1%	2%	
				manufacturing, mining, construction	21%	23%	
Personal income per capita, 1995	$23,597	$22,788	15	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	14%	16%	
Federal spending				finance, insurance, real estate	16%	18%	
Total expenditures, 1995 (millions)	$51,305	$1,326,294	6	services	19%	20%	
R&D obligations, 1994 (millions)	$3,730	$65,654	4	government	20%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Virginia by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	3,729,683	1,381,817	215,819	1,875,922	195,799	56,060	4,266	4
Department of Agriculture	11,419	1,549	0	50	8,854	966	0	37
Department of Commerce	32,506	8,254	0	20,055	3,915	149	133	8
Department of Defense	2,635,027	970,955	158,590	1,453,218	27,616	24,648	0	3
Department of Energy	76,133	12,619	43,809	10,510	9,115	80	0	17
Dept. of Health & Human Services	149,767	107	0	42,995	96,438	8,857	1,370	19
Department of the Interior	56,036	43,916	0	10,941	1,174	5	0	1
Department of Transportation	52,670	8,043	13,327	28,247	1,723	0	1,330	3
Environmental Protection Agency	37,979	0	0	35,782	764	0	1,433	4
Nat'l Aeronautics & Space Admin.	635,300	333,541	0	270,723	19,487	11,549	0	5
National Science Foundation	42,846	2,833	93	3,401	26,713	9,806	0	17
State rank	4	4	6	6	19	11	17	

Federal R&D obligations are as reported by funding agencies.
FFRDC = federally funded research and development center
SBIR = small business innovation research
na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

WASHINGTON

Science and Engineering Profile

	Washington	U.S.	Rank
Doctoral scientists, 1993	10,216	430,332	15
Doctoral engineers, 1993	1,848	81,293	13
S&E doctorates awarded, 1995	466	26,482	19
of which, in life sciences	30%	24%	
in engineering	22%	23%	
in social sciences	14%	15%	
S&E postdoctorates, 1994 in doctorate-granting institutions	992	36,143	11
S&E graduate students, 1994 in doctorate-granting institutions	6,042	438,694	24
Population, 1995 (000s)	5,431	262,755	15
Civilian labor force, 1995 (000s)	2,805	132,281	17
Personal income per capita, 1995	$23,639	$22,788	14
Federal spending			
Total expenditures, 1995 (millions)	$28,899	$1,326,294	16
R&D obligations, 1994 (millions)	$950	$65,654	18

	Washington	U.S.	Rank
Total R&D performance, 1993 (millions)	$5,422	$161,427	11
Industry R&D, 1993 (millions)	$4,689	$117,622	10
Academic R&D, 1994 (millions)	$438	$20,573	14
of which, in life sciences	63%	55%	
in environmental sciences	13%	7%	
in engineering	7%	16%	
Higher education current-fund expenditures, 1993 (millions)	$2,922	$163,994	20
Number of SBIR awards, 1990-94	357	18,023	14
Patents issued to state residents, 1995	1,034	55,717	17
Gross state product, 1992 (billions)	$127.6	$5,994.1	14
of which, agriculture	3%	2%	
manufacturing, mining, construction	21%	23%	
transportation, communication, utilities	8%	9%	
wholesale and retail trade	18%	16%	
finance, insurance, real estate	17%	18%	
services	19%	20%	
government	14%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Washington by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	950,186	149,445	144,292	252,012	306,621	91,598	6,218	18
Department of Agriculture	35,783	18,915	0	188	16,479	131	70	11
Department of Commerce	59,818	54,990	0	2,086	2,610	0	132	3
Department of Defense	274,002	47,480	3,090	193,005	25,449	4,978	0	21
Department of Energy	167,743	7,532	133,609	8,841	17,345	116	300	10
Dept. of Health & Human Services	290,859	19	7,593	6,333	189,461	83,256	4,197	8
Department of the Interior	22,731	19,643	0	736	2,307	45	0	7
Department of Transportation	3,110	0	0	1,176	438	40	1,456	31
Environmental Protection Agency	858	0	0	0	795	0	63	35
Nat'l Aeronautics & Space Admin.	48,929	866	0	38,431	9,257	375	0	13
National Science Foundation	46,353	0	0	1,216	42,480	2,657	0	13
State rank	18	18	9	19	11	8	7	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

WEST VIRGINIA

Science and Engineering Profile

	W. Virginia	U.S.	Rank		W. Virginia	U.S.	Rank
Doctoral scientists, 1993	1,546	430,332	45	Total R&D performance, 1993 (millions)	$280	$161,427	44
Doctoral engineers, 1993	372	81,293	37	Industry R&D, 1993 (millions)	$100	$117,622	43
S&E doctorates awarded, 1995	78	26,482	41	Academic R&D, 1994 (millions)	$59	$20,573	43
of which, in engineering	35%	23%		of which, in life sciences	47%	55%	
in life sciences	27%	24%		in engineering	22%	16%	
in physical sciences	15%	14%		in environmental sciences	12%	7%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	31	36,143	47	expenditures, 1993 (millions)	$739	$163,994	40
S&E graduate students, 1994				Number of SBIR awards, 1990-94	4	18,023	48
in doctorate-granting institutions	2,047	438,694	39	Patents issued to state residents, 1995	134	55,717	41
Population, 1995 (000s)	1,828	262,755	35	Gross state product, 1992 (billions)	$30.7	$5,994.1	40
Civilian labor force, 1995 (000s)	790	132,281	37	of which, agriculture	1%	2%	
				manufacturing, mining, construction	30%	23%	
Personal income per capita, 1995	$17,915	$22,788	49	transportation, communication, utilities	13%	9%	
				wholesale and retail trade	14%	16%	
Federal spending				finance, insurance, real estate	14%	18%	
Total expenditures, 1995 (millions)	$10,001	$1,326,294	36	services	15%	20%	
R&D obligations, 1994 (millions)	$213	$65,654	35	government	12%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in West Virginia by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	212,864	95,891	29,218	43,555	31,741	10,099	2,360	35
Department of Agriculture	20,189	15,104	0	0	3,783	1,302	0	24
Department of Commerce	0	0	0	0	0	0	0	na
Department of Defense	14,528	1,364	0	7,524	1,431	4,209	0	43
Department of Energy	93,528	62,063	0	29,538	1,927	0	0	13
Dept. of Health & Human Services	21,639	9,400	0	1,790	7,522	1,362	1,565	42
Department of the Interior	8,952	7,460	0	24	1,468	0	0	20
Department of Transportation	2,345	0	0	700	850	0	795	34
Environmental Protection Agency	308	0	0	308	0	0	0	43
Nat'l Aeronautics & Space Admin.	19,034	500	0	3,671	11,682	3,181	0	23
National Science Foundation	32,341	0	29,218	0	3,078	45	0	20
State rank	35	23	14	34	43	27	32	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled fr[illegible]numerous sources.

WISCONSIN

Science and Engineering Profile

	Wisconsin	U.S.	Rank		Wisconsin	U.S.	Rank
Doctoral scientists, 1993	7,029	430,332	22	Total R&D performance, 1993 (millions)	$1,851	$161,427	22
Doctoral engineers, 1993	936	81,293	25	Industry R&D, 1993 (millions)	$1,343	$117,622	19
S&E doctorates awarded, 1995	612	26,482	14	Academic R&D, 1994 (millions)	$467	$20,573	13
of which, in life sciences	28%	24%		of which, in life sciences	59%	55%	
in engineering	21%	23%		in engineering	13%	16%	
in physical sciences	17%	14%		in physical sciences	9%	10%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	648	36,143	17	expenditures, 1993 (millions)	$3,429	$163,994	16
S&E graduate students, 1994				Number of SBIR awards, 1990-94	130	18,023	26
in doctorate-granting institutions	8,942	438,694	17	Patents issued to state residents, 1995	1,209	55,717	13
Population, 1995 (000s)	5,123	262,755	18	Gross state product, 1992 (billions)	$109.5	$5,994.1	19
Civilian labor force, 1995 (000s)	2,846	132,281	15	of which, agriculture	3%	2%	
				manufacturing, mining, construction	31%	23%	
Personal income per capita, 1995	$21,839	$22,788	23	transportation, communication, utilities	8%	9%	
				wholesale and retail trade	15%	16%	
Federal spending				finance, insurance, real estate	17%	18%	
Total expenditures, 1995 (millions)	$19,815	$1,326,294	24	services	16%	20%	
R&D obligations, 1994 (millions)	$350	$65,654	27	government	11%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Wisconsin by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	349,627	40,576	0	37,116	252,386	16,010	3,539	27
Department of Agriculture	37,024	25,257	0	105	11,628	0	34	10
Department of Commerce	2,177	625	0	0	1,502	0	50	30
Department of Defense	39,923	137	0	9,968	21,995	7,823	0	33
Department of Energy	21,328	120	0	0	21,208	0	0	25
Dept. of Health & Human Services	152,319	0	0	1,866	140,333	8,133	1,987	18
Department of the Interior	14,505	13,940	0	150	415	0	0	14
Department of Transportation	3,506	497	0	1,493	123	0	1,393	29
Environmental Protection Agency	1,748	0	0	332	1,416	0	0	26
Nat'l Aeronautics & Space Admin.	37,090	0	0	23,202	13,834	54	0	17
National Science Foundation	40,007	0	0	0	39,932	0	75	18
State rank	27	37	na	36	13	24	24	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

WYOMING

Science and Engineering Profile

	Wyoming	U.S.	Rank
Doctoral scientists, 1993	716	430,332	51
Doctoral engineers, 1993	102	81,293	49
S&E doctorates awarded, 1995	50	26,482	46
of which, in life sciences	34%	24%	
in engineering	22%	23%	
in physical sciences	20%	14%	
S&E postdoctorates, 1994 in doctorate-granting institutions	37	36,143	46
S&E graduate students, 1994 in doctorate-granting institutions	992	438,694	48
Population, 1995 (000s)	480	262,755	51
Civilian labor force, 1995 (000s)	256	132,281	51
Personal income per capita, 1995	$21,321	$22,788	28
Federal spending			
Total expenditures, 1995 (millions)	$2,506	$1,326,294	51
R&D obligations, 1994 (millions)	$37	$65,654	50

	Wyoming	U.S.	Rank
Total R&D performance, 1993 (millions)	$63	$161,427	50
Industry R&D, 1993 (millions)	$15	$117,622	48
Academic R&D, 1994 (millions)	$34	$20,573	49
of which, in life sciences	50%	55%	
in environmental sciences	23%	7%	
in physical sciences	8%	10%	
Higher education current-fund expenditures, 1993 (millions)	$270	$163,994	51
Number of SBIR awards, 1990-94	3	18,023	49
Patents issued to state residents, 1995	49	55,717	49
Gross state product, 1992 (billions)	$13.2	$5,994.1	49
of which, agriculture	4%	2%	
manufacturing, mining, construction	35%	23%	
transportation, communication, utilities	17%	9%	
wholesale and retail trade	11%	16%	
finance, insurance, real estate	12%	18%	
services	9%	20%	
government	13%	12%	

Industry R&D data are subject to future revisions.

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development in Wyoming by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
Total, all agencies	36,576	8,366	0	9,754	12,535	5,036	885	50
Department of Agriculture	6,954	4,390	0	0	2,550	14	0	42
Department of Commerce	0	0	0	0	0	0	0	na
Department of Defense	2,336	4	0	0	2,332	0	0	48
Department of Energy	9,866	0	0	4,878	183	4,805	0	33
Dept. of Health & Human Services	1,192	0	0	0	670	200	322	51
Department of the Interior	4,384	3,972	0	0	412	0	0	32
Department of Transportation	5,832	0	0	4,876	376	17	563	20
Environmental Protection Agency	40	0	0	0	40	0	0	48
Nat'l Aeronautics & Space Admin.	960	0	0	0	960	0	0	45
National Science Foundation	5,012	0	0	0	5,012	0	0	46
State rank	50	48	na	44	50	35	48	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.

Puerto Rico

Science and Engineering Profile

	Puerto Rico	U.S.		Puerto Rico	U.S.
Doctoral scientists, 1993	787	430,332	Total R&D performance, 1993 (millions)	N/A	$161,427
Doctoral engineers, 1993	146	81,293	Industry R&D, 1993 (millions)	N/A	$117,622
S&E doctorates awarded, 1995	33	26,482	Academic R&D, 1994 (millions)	$51	$20,573
of which, in psychology	82%	13%	of which, in life sciences	76%	55%
in physcial sciences	18%	14%	in physical sciences	7%	10%
in other S&E fields	0%	N/A	in engineering	6%	16%
S&E postdoctorates, 1994 in doctorate-granting institutions	15	36,143	Higher education current-fund expenditures, 1993 (millions)	$843	$163,994
S&E graduate students, 1994			Number of SBIR awards, 1990-94	1	18,023
in doctorate-granting institutions	2,786	438,694	Patents issued to state residents, 1995	20	55,717
Population, 1995 (000s)	3,703	262,755	Gross state product, 1992 (billions)	$34.6	$5,994.1
Civilian labor force, 1995 (000s)	1,245	132,281	of which, agriculture	1%	2%
			manufacturing, mining, construction	43%	23%
Personal income per capita, 1995	$7,296	$22,788	transportation, communication, utilities	8%	9%
			wholesale and retail trade	14%	16%
Federal spending			finance, insurance, real estate	13%	18%
Total expenditures 1995 (millions)	$9,939	$1,326,292	services	10%	20%
R&D obligations 1994 (millions)	$51	$65,654	government	11%	12%

U.S. totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields. The data source for Puerto Rico's population, personal income per capita, number of SBIR awards, and gross state product is as follows: *Economic Report to the Governor*, Puerto Rico Planning Board, San Juan, Puerto Rico.

N/A = not available

Federal Obligations for Research and Development in Puerto Rico by Agency and Performer: Fiscal Year 1994

(Thousands of dollars)

	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government
Total, all agencies	50,502	7,216	10,035	0	30,616	100	2,535
Department of Agriculture	9,608	5,277	0	0	4,331	0	0
Department of Commerce	446	0	0	0	280	0	166
Department of Defense	1,393	0	0	0	1,393	0	0
Department of Energy	68	0	0	0	68	0	0
Dept. of Health & Human Services	21,632	0	0	0	19,561	100	1,971
Department of the Interior	2,039	1,939	0	0	100	0	0
Department of Transportation	551	0	0	0	153	0	398
Environmental Protection Agency	395	0	0	0	395	0	0
Nat'l Aeronautics & Space Admin.	0	0	0	0	0	0	0
National Science Foundation	14,370	0	10,035	0	4,335	0	0

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

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